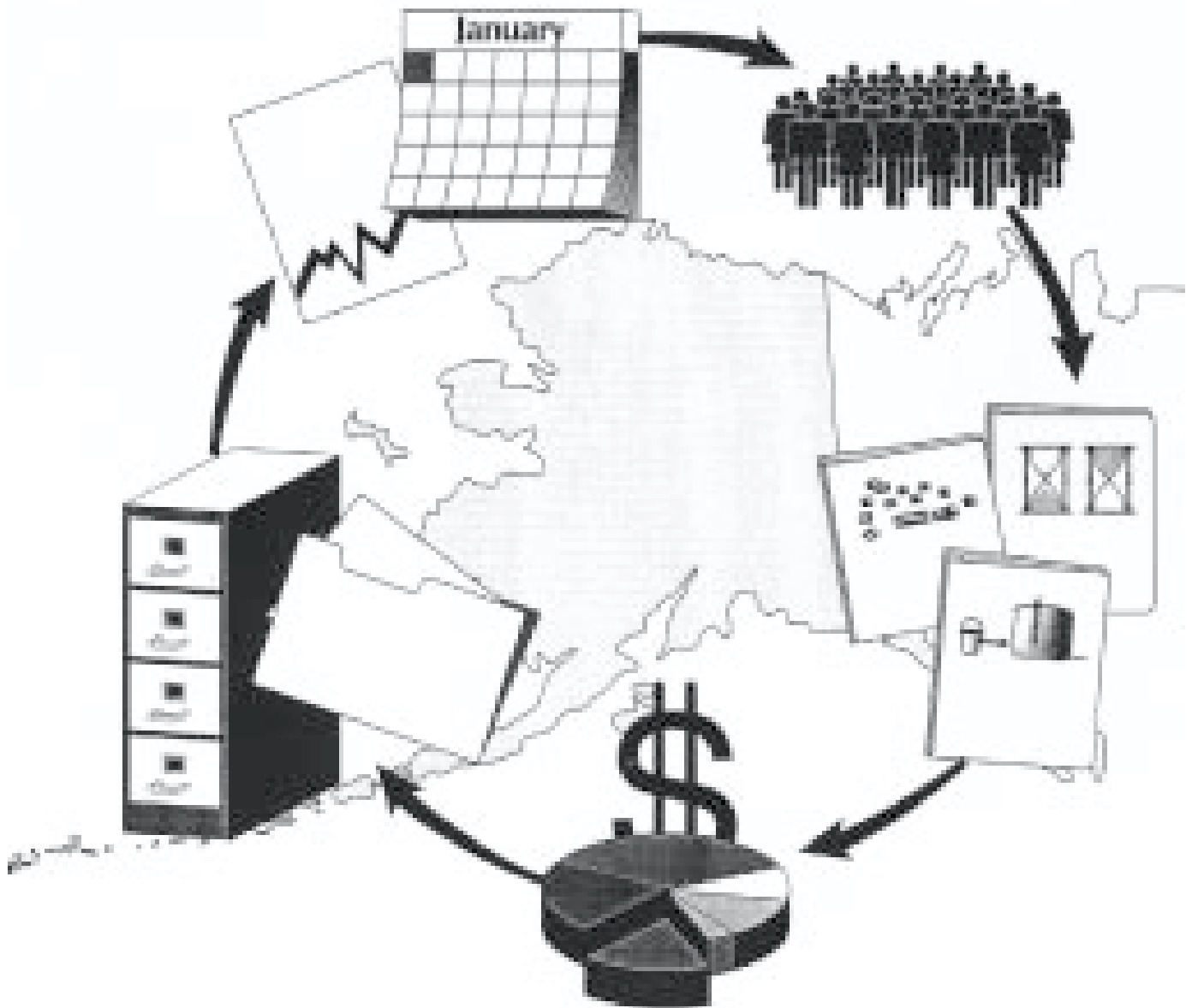


Introduction to Utility Management *Instructor's Guide*



State of Alaska

Department of Community and Economic Development

3rd Edition

Introduction to Utility Management

Instructor's Guide

State of Alaska
Department of Community and Economic Development

Funding:

Provided by US Environmental Protection Agency grant

Guiding Agencies:

Alaska Department of Community and Economic Development

Tanana Chiefs Conference

Alaska Department of Environmental Conservation

US Public Health Services/Alaska Native Tribal Health Consortium

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Previous Editions:

First and second editions were developed by Arasmith Consulting Resources

3rd Edition, December 1999

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Foreword

The goal of this 32-hour training course is to provide utility managers of small water and wastewater facilities (communities size of 100 and 1500) in Alaska a basic understanding of the principles and practices involved in managing their facilities.

The management methods selected for this course have been field tested in Alaska and are known to be successful. Nevertheless, they are not put forth as the only way to do things. Instructors and students alike should be open-minded about new or alternative ways to manage a utility, without “reinventing the wheel.”

The management philosophy promoted for Alaska’s rural utilities includes these hallmarks of a successful utility:

- They are operated as an enterprise, (even if they need to be a subsidized one).
- The manager has a clear view of how the utility should be operated and is able to communicate that view to the staff and customers.
- They are financially sound.
- They have good support from their customers.
- They treat their customers well.
- They have few employee problems.
- They are proactive rather than reactive to customer concerns, regulations, system condition, water quality, and employee concerns.
- The details of how the utility is run and its relations with customers are written in easy to access documents: organizational chart, utility ordinance, user agreements, employee handbook and job descriptions, etc.

The teaching philosophy for this course should embrace the following two facets. First, it is important that the students be presented the subject matter in a clear fashion so they may learn the basics of utility management. Second, and also of great value, is for students to develop a rapport with the instructors and colleagues. If this happens, long after the class is completed, these students will be calling their peers and the instructors for advice and comments. Therefore an important aspect of the instructors’ job is to foster this networking and melding of each participant’s wisdom and experience, on or off formal class time.

The design of this course is intended to allow the instructors enough flexibility to respond to each class and their individual circumstances and personalities. Please feel free to sculpt it to the needs of the class.

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General Considerations

Support Materials & Room Setup Suggestions

Equipment needed:

- Overhead projector
- Screen
- Blank overhead sheets
- Overhead markers
- Blackboard, white board or flip chart
- Markers for above as appropriate
- Chairs and tables
- Name tags with student's name and community
- Desk tents with student's name and community
- Kitchen timer
- Calculators (one per every student or two, if possible)

Provide for each student:

- Student Manual
- Three-hole punched blank paper
- Pencils and pens

Students should bring:

- Copy of their utility's ordinance, personnel manual, safety manual, budgets, assets list, and utility plans, as practical
- calculator, if possible

The use of freestanding chairs and tables rather than writing desks gives the students the options of shifting their chairs during the class, particularly during the group exercises. Better yet, have a separate area for group discussions, so groups are not too close to each other. There should be a storage area for student's coats, extra books etc., so students can keep their desk relatively clear.

The kitchen timer is good if you have trouble getting exercises done in the allotted time, or getting back to work after breaks. Set the timer for a specific amount of time and when it dings, everyone knows it's time to wrap up. This frees you from one more thing to think about. If you don't want to use the timer, consider assigning a willing and able student as timekeeper, or another instructor.

Three hole punched note paper used to take notes on can be immediately inserted into the appropriate spot in the student manual so as not to get lost. Students can also write notes in the wide margins of the manual. There should be plenty of good pens available and a phone

General Considerations

nearby but not in the same room as the class.

Coffee, tea and snacks should be available at the back of the room or in an adjoining room. Encourage the students to take advantage of the breaks and lunch times to get to know one another and discuss class topics. Try to be available yourselves to answer questions and participate in these discussions. Set a casual atmosphere.

In contacting students in advance of the course, let them know of the requested items for them to bring. Some utilities may not even have all the listed documents. If they did, it could be a weighty package, so common sense is called for.

Course Delivery

Design of the course

The course was designed with a logical progression of the material in mind. But it is important to remember, and to verbalize to the class from the onset, is that these neat segments really are all mixed together in real life. You cannot isolate them. A financial statement might also turn out to be a good public relations tool, or a maintenance decision might affect a personnel decision. Use the overview time at the start of the course to make sure the students know what you are talking about when you bring in concepts to the discussion that have not been covered in a main lesson. This is especially true concerning topics not commonly talked about such as public relations and customer service.

Delivering the material

As much as possible the course should follow the sequence outlined in this guide and in the student manual. This makes it easier for the student to follow along in their manual and also for them to find things later based on when the material was presented. There is always room for flexibility though, especially in how long you spend on each subject. You will know this when you get a feel for the level and special situations of the students.

The course was designed to alternate between instructor presentations and more student-active periods such as the exercises and review worksheets. Even during the instructor presentations, try to vary the delivery by encouraging student questions and posing some to them. Switch back and forth between the overhead projector and the flip chart (or black or white board). You do not need to steadily plop each overhead on the projector one after another. You may choose to skip one or two now and then and write or diagram the concept in your own way on the board.

Suggested Time Lines

The five general topics covered in this class (organizational, planning, personnel, operations & maintenance, and financial management) have been laid out in eight three- to four-hour segments (corresponding to the chapters of the Student Manual) plus an introduction & overview section and the pre and post tests. A hypothetical class would start Monday after lunch and end Friday at noon, but the same sequence can be repositioned for whatever time is allotted to teach the course. This general course schedule is given in the chart below. A more detailed

schedule is given in the presentation sequence for each of the segments, but the instructor will need to be flexible and shift the time sequence as necessary to meet the individual needs of the class.

Description of the Pre/Post Test

The pre/post test is used to test growth of knowledge. The pre-test is given the first hour of the first day. The pre/post test is designed to cover the full range of material and to try to hit the most important concepts. Since it is assumed that the students know little of the subject when they start the class, they will usually not do well. Then, at the end of the class, when they take the post test, we hope they pass with flying colors. This will be proof that learning has been achieved in the class.

For statistical accuracy, you can give the same test at the end as at the beginning. There are, however, enough questions to give a different test at the end.

Function of Key Terms in the Text

The emphasis on key words in the text is for one very important reason. When a utility manager has to pick up the phone and call someone outside the village, they will have to use the vocabulary of the industry. Even if many of these terms are not used in the village, when talking to the ADEC, EPA or their RUBA, these words will be standard.

General Considerations

Suggestions for the Use of the Exercises

The exercises are a large part of the course. There are more exercises than can possibly be used, so it's the instructor's prerogative to determine which exercises to use and when and how they will be used. Because of this flexibility, the sequence of delivery does not contain the exercises and can't be calibrated to a time schedule until they are chosen. The exercises, blocks of overheads and other lesson elements have estimated times next to them on the sequence of delivery. Notes for instructors about each exercise appear for each lesson after the sequence of delivery. The individual exercises are headed with time and material requirements and some general instructions. Most of these remarks are intended for both instructor and student and therefore the exercise sheets are ready to copy for class distribution as needed. Some only require simple instructions verbalized or written on the overhead or board. Some have fill-in worksheets.

Work on introducing and starting each exercise so the students are excited about it. Guide them along so they stay on the core material, and keep an eye on the clock. Feel free to tailor the exercises to meet the particular needs of the class. When the exercise calls for breaking the class into groups, try to mix them up now and then, but allow them to do several exercises with the same group too. This way they can get to know all the other students at least a little and begin to feel comfortable with a subset.

The following is a list of exercises for use with this course. Each lesson is designed with a minimum amount of delivery time and a maximum amount of student interaction. In each lesson the number of student exercises provided exceeds the amount of time available. The instructor must select those exercises that provide the greatest benefit to the participants.

List of Exercises

For page numbers for the exercises, see the table of contents starting on page 4.

Introduction and Overview

#	Exercise	Level	Time
1	Ice Breaker <i>Set the stage for creative thinking</i>	Intro	0:15
2	System Assessment <i>Classify water and/or wastewater system</i>	1	0:30
3	System Evaluation <i>Simple system evaluation tool</i>	1	0:30
4	System Audit <i>Detailed system evaluation tool</i>	2	0:45
5	Value of Assets <i>Identify approximate value of system assets</i>	1	1:00
6	Your Worst Nightmare <i>Discuss just how bad things can get and how to deal with it</i>	1	:45

Organizational Management

#	Exercise	Level	Time
1	Who Owns the Store? <i>Establish responsibility for sanitary facilities</i>	Intro	0:30
2	Organizational Chart <i>Assignment of responsibility, authority and accountability</i>	1	1:00
3	Utility Ordinance <i>Learn the value of utility ordinance using an assessment form</i>	2	0:45
4	Stakeholder Responsibilities <i>Identify who's responsible for what through a game</i>	1	0:45
5	Record Keeping <i>Learn where to file records</i>	1	:30-45
6	Agencies & Regulations <i>Sort out the alphabet soup with a game</i>	1	0:30
7	Quick Rate Hike <i>Explore the value of public relations</i>	1	0:15
8	Public Hearing <i>Face the realities of customer questions & complaints</i>	2	:30-45

Planning Management

#	Exercise	Level	Time
1	Master Plan/Level of Service <i>Explore the issue of level of service and how it effects planning</i>	2	:45
2	Project Plan <i>Organize the steps in a project plan</i>	1	:30
3	Which Plan to Use <i>Learn the function of various plans</i>	1	:30
4	If Only We Could Go Back <i>Explore how planning could have avoided problems</i>	1	:30

Personnel Management

#	Exercise	Level	Time
1	Employee Problems <i>Share experiences and vent frustration</i>	1	:30
2	Behavior Styles <i>Become aware of how an individual's personality type affects their work</i>	1	:30
3	Values Clarification <i>Explore differences in value systems</i>	2	1:00

General Considerations

4	Values & Decision Making <i>Discuss how values affect our decision making process</i>	2	:30
5	Behavior vs Motives <i>Realize how labels prevent us from effectively communicating</i>	2	:30
6	Motivation <i>Explore what motivates people</i>	2	:30
7	Personnel Policy & Safety Program <i>Evaluate the existing system</i>	1	:30
8	Manager's Self Evaluation <i>Assess management and leadership skills</i>	2	:20+
9	Small Win <i>See how some small changes and a big effort can pay off</i>	2	:30
10	EEO & AA <i>Gain knowledge of EEO & Affirmative Action</i>	2	:30
11	The Communication Gap <i>Hear how one-way communication is imprecise</i>	1	:30-40
12	Best Communication <i>Come up with the best communication method for various situations</i>	1	:30
13	What Would You Do <i>Gain practice in handling typical personnel & intra-government problems</i>	2	:30

Operations Management I & II

#	Exercise	Level	Time
1	Frequency of Tasks <i>Importance of maintenance familiarity</i>	2	:30
2	Operations & PM Management <i>Learn the value of Ops & PM Plan-(2 levels to chose from)</i>	1-2	:30+
3	Blue Monday <i>Time management, organization skills, delegation, work order system, and asset inventory control</i>	2	:30
4	Contingency Plan <i>Boil water notice - value of a emergency plan</i>	2	1:00
5	Walk Through Washeteria <i>Group problem solving</i>	2	:45
6	Computers & Utilities <i>Explore the pros and cons of computers</i>	2	:45
7	Calendar Brainstorm <i>Consider various time demands and how to organize them</i>	1	:15
8	Objective Risk Assessment <i>Rate the risk and value of protection for possible emergencies</i>	1	:30-40

- | | | | |
|---|--|---|-----|
| 9 | Out to Sea | 1 | :40 |
| | <i>See the value of utilizing various aspects of organization and management</i> | | |

Financial Management I & II

#	Exercise	Level	Time
1	We All Budget <i>Use subsistence situation to explore budgeting process</i>	1	:45
2	Seal Bay Utility Budget <i>Evaluation of a small utility budget</i>	1	:45
3	Whale Cove Financial Reports <i>Evaluation of an annual operating plan, budget, monthly financial and operations/management report</i>	2	1:00-2:00
4	Lets be Fair About This <i>Explore allocation of funds</i>	2	:20-:30
5	Collections <i>Learn to apply different collection strategies to different situations</i>	1	1:00
6	Budgeting for Reserves <i>Calculate amounts needed to put into reserves for various classes of equipment</i>	1	:20-30
7	Budget Busters <i>Analyze the impact, if any, on budgets and rates</i>	2	:45
8	Points to Ponder <i>Discussion of how to handle tough situations</i>	1	:30-40

Suggestions for the Use of the Review Worksheets

Review worksheets are important to the student because they are a summing up of the important lessons of that section of the class. It's important for the students to have some guide as to what they were supposed to have learned. If they can respond to the worksheets at the end of each chapter, they know they have learned the minimum required in the class.

The worksheets can be filled out during the presentation of the lesson, or during the time given at the end of the lesson. Give them your preference or a choice. If they fill them out during the presentation, ask them to read over their worksheet one more time at the end. They will likely find a few answers they want to change. Mostly it will enhance the retention. You can collect the worksheets and look them over, or go over the answers as a class and have them correct their own. A good idea is to use both methods. The first time or two collect them so you can keep close tabs and make sure there are no problem areas. At other times have them correct their own, and you can still scan them if you want.

Remember there are often several valid answers that will fit in the blanks. Given that the worksheets were meant to be filled out during or right after the instructor goes over the very topic, most students should be able to find the words that appear as the "answers." This is fine. Different but perfectly correct words in the blanks usually indicate a good understanding of the material.

General Considerations

Suggestions for the Use of the Action Plans

Although the main thrust of this course is to raise awareness of the management issues and motivate managers to attend to them, graduates of the class should put the ideas to work as much as possible. To encourage this, an action plan is drawn up based on what areas the student sees as most needing work in their utility. Instead of waiting to the end of the class, it is highly recommended that students write out action items, or at least rough notes toward that goal, at the end of each lesson while the material is fresh. At the end of the course, they will look these over, delete some, add others and reword them into solid action plans to take home and start working on. There is a note taking page with an area for action items at the end of each lesson.

Introduction & Overview

Key concepts to learn

- The purpose of water and wastewater facilities
- The five resources under the direction of a manager
- The major physical components of a water system
- The major physical components of a wastewater system
- How water and wastewater systems are classified
- The special Alaska considerations for management of a sanitation utility
- The constraints on operation, maintenance and management of an Alaskan sanitation utility
- The five groupings of management functions that this course covers

Key terms to know

- Effluent
- Groundwater
- Potable Water
- Surface Water
- Governance
- Resources
- Waterborne Disease
- MCL

Presentation Sequence

Welcome :40

This first part of this block of time will be used up for arrival of the students, check-in and the passing out of workbooks. This is a casual time so students should be encouraged to meet their peers and begin to network.

Introduction of course: give a brief review of the nature of the course, who funded it, who is sponsoring it, and how it fits into the big picture of upgrading bush sanitation.

Introductions: The instructors should first introduce themselves and tell a little about themselves. Then go around the room and have the students introduce themselves. Give them a simple list of things to tell, such as name, community, job title, how long they have been on the job, and what do they like to do on their time off.

Try to foster an informal and friendly atmosphere so students can get to know each other and interact. Instructors should compile a list of students with their phone, fax and email address to pass out later and encourage ongoing conversations.

Pre-test :45

The test itself should only take about 20-30 minutes. The extra time is to explain it, pass it out, and pick it up.

Introduction & Overview

Introduction & Overview :50

This time seems generous but you may need it to account for schedule problems. There is also value in opening up discussion and getting to know the students and their situations early on.

- Overheads 1-6 It is very important that all the students know why they are taking the course, what it intended to do for them, and even why they do the job they do. Also introduce, and refer back to whenever possible, the guiding principles of the course. Explain that these have come together through much experience and trail and error in many Alaskan villages. We are not trying to indoctrinate anyone but learn from what went before.
- Many students will be unfamiliar with the concept of enterprise. It is a very important concept but one that is often misinterpreted. And we always say “*like* a business,” rather than give the impression they are to all of a sudden become a profit hungry corporation.
- Overhead 7 Managers know the job is a hard one, but they need to be aware of some of the specific hurdles. Also, while talking about some of the challenges of running a Utility in Alaska, mention some of the *advantages*: lower taxes, lots of space, lots of grant money available, clean water sources etc.
- Overheads 8-9 How detailed or quickly you go through these two overheads depends on the student’s knowledge of design and operations. They need to know or be learning the basics.
- Overheads 10-12 An overview of the main lessons of the course, the schedule and how the teaching will be conducted.

Exercises 1:20

Select and lead exercises to fit the time available keeping mind the worksheets and wrap-up.

Worksheet & action items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later. There are fewer worksheet questions in this first lesson and may not be many action items spawned.

Wrap-up & Homework

Assign the *Organizational Management* and *Planning* chapters to be read before tomorrow’s class. Ask them to jot down any questions or issues they come across as they read.

Exercise notes

Exercise 1	:15	Ice Breaker Gets the class started with something to warm up the brain. The point to this activity is to get the students to think creatively; to not place unnecessary restrictions on their options.
Exercises 2-4	:30 to 1:00	Examining utility facilities and practices The purpose of each of the next three exercises is to raise awareness of the types of facilities and management systems in place in the utility or community, or at least the awareness of the need to learn about them. They are designed for individuals but there is value in sharing questions, revelations etc., with small groups and/or with the entire class. Remember a big part of the course is for the students to develop rapport with others in their field and learn about other situations. Also, encourage the students to take their forms home and redo them when they have access to more complete information or help from technical staff. Look over all three tools and choose the best one or ones to use and when to use them.
Exercise 5	:45 to 1:00	Value of Assets Many people, whether connected to the utility or not, are not aware of the huge capital investment involved in sanitation facilities. This is especially true for small communities when that value is put in a per-capita light. This exercise is intended to give each manager a good estimate of how much their infrastructure is worth and what portion each man, woman and child owns. Knowing this should give importance and motivation to the job...protecting not only village health but a large public investment as well.
Exercise 6	:45	Your Worst Nightmare This exercise lets the students vent a little about their worst headaches as managers. It is also valuable for exposing students to others' problems that they may encounter down the road, and seeing how the concepts learned or to be learned in the class could smooth out that road. Stress that the events should be kept as anonymous as possible and also that we are not picking on anyone or making fun of anyone, but looking to learn.

Introduction & Overview

Exercise 1

ICE BREAKER

Purpose

Get participants to break habit of assuming restrictions or constraints.

Format

This activity was designed as an ice breaker for the entire class.

Time Requirement

0:10-0:15

Resources Needed

- One copy of the nine dot and square puzzle sheet per student

Background

There are three points that are made with the two exercises.

- With the nine dots make these points - Don't box yourself in, think beyond. Students need to look beyond "we can't do that because..." or "We tried that but...".
- The squares game is used to point out that things are never as simple as they seem. This goes for people also; people are more complicated than first appearance.
- Don't assume rules; don't put constraints on yourself.

Activity - Nine Dots

1. Instruct all participants to connect the nine dots using four straight but connected lines. Once the pencil is placed on the paper they cannot lift it up to start a new line.
2. If they already know how to do this exercise then ask them to connect the dots with three straight lines. Or with one straight line.
3. After a few minutes share the answers.
4. Ask, "How many attempted to stay within a box formed by the nine dots?" This was not one of the rules. Tell them they boxed themselves in, not you. The point is don't box yourself in with:
"We already tried that."
"That won't work at our utility because . . ."
Look instead for how to make things work.
As for connecting the dots with one line this can be accomplished in 64 different ways. The most common are:
 - Use one wide line.
 - Roll the page and draw a line around the roll.
 - Tear the page so the dots can be aligned end to end.

Some will say that this is cheating. Your comment should be that it is all right to bend the rules if they prevent you from being successful.

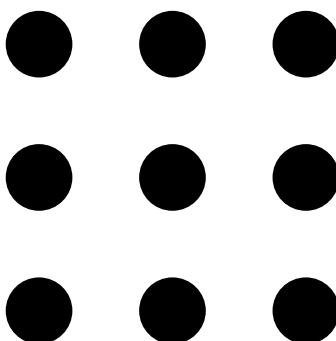
It is difficult to fire a successful individual that bends the rules.

Activity - Squares

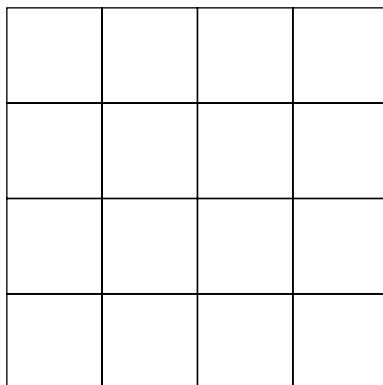
1. They should already have the squares game.
2. Instruct them to count the squares.
3. Ask how many they found. Most will find 17, some will find more. After a few minutes share the answer.
4. Notice that things are not as they seem on the surface. We need to withhold judgment until we have evaluated people, issues and tasks. This is also true of this course.
5. We are now ready to start the course.

ICE BREAKER — Puzzles

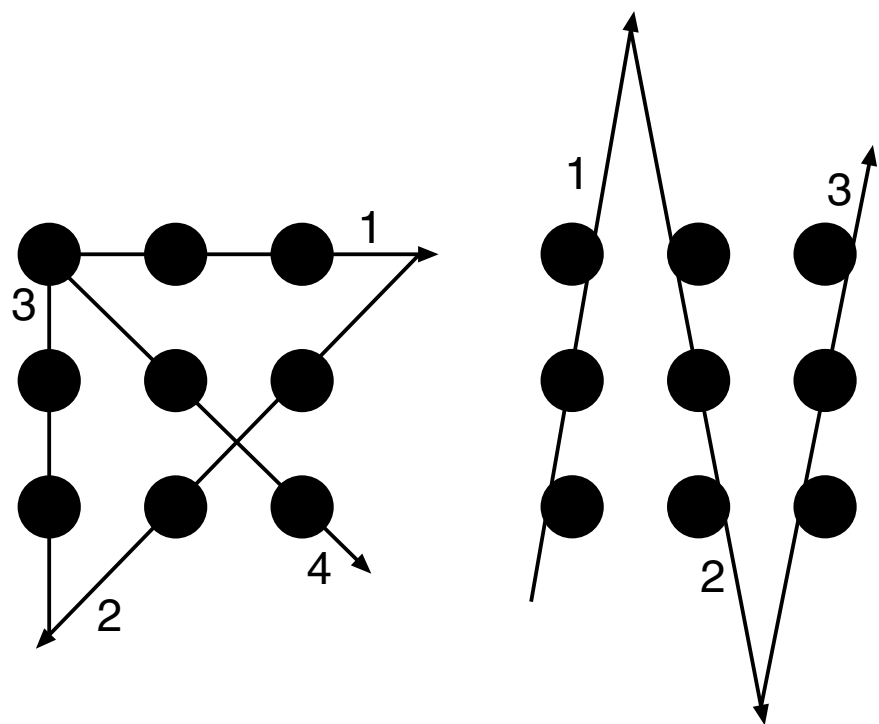
Connect the nine dots below with no more than four straight, connected lines.



Count the number of squares in the drawing below.



ICE BREAKER — Puzzle solutions



1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

17			
	18		

	19		
22			20
	21		

23			24
25			26

27			
			28

			29
30			

Exercises 2, 3 & 4 EXAMINING UTILITY FACILITIES & PRACTICES

Purpose	Raise awareness of the types of facilities and management systems in place in the utility or community.
Format	This activity was designed for individuals. The individual responses can be shared in small groups and/or with the entire class.
Time Requirement	30-45 minutes
Resources Needed	<p>Note there are three different assessment tools. The instructor should select which one they like the most and use it.</p> <p>The following resource should be gathered prior to the start of this activity.</p> <ul style="list-style-type: none">• One copy of the selected assessment tool for each participant
Background	In order to develop an appreciation for the requirements of management, it often is necessary for managers to take a close look at their existing system. This assessment tool is designed to allow the manager to develop a basic understanding of the condition of the existing system and/or the lack of knowledge about the system.
Activity	<p>Follow these steps:</p> <ol style="list-style-type: none">1. Provide one copy of the chosen tool for each participant.2. Allow 15 to 20 minutes for them to complete the tool if using one of the first two, 30 minutes for the third. Be available to answer questions if necessary.3. Place the participants in small groups of 4 to 6 people each.4. Direct them to share information about their system with the members of the group.5. After the discussion has died down, ask for input on what they learned.

Introduction & Overview

Exercise 2 SYSTEM ASSESSMENT

SANITATION FACILITIES BACKGROUND CHECK

1. Classify your water system by source:

- ☐ Groundwater
- ☐ Surface water
- ☐ Both

2. If surface water is used, name of the sources _____.

3. Date the water system was first installed _____.

4. Date the wastewater system was first installed _____.

5. Owner of the systems _____.

6. Population served by this systems _____.

gpdpc means gallons per day per customer

7. Average daily use in your systems _____ gpdpc.

8. Maximum day last month _____ gpdpc, which occurred on _____.

9. Minimum day last month _____ gpdpc, which occurred on _____.

10. Maximum day last year _____ gpdpc, which occurred on _____.

11. Minimum day last year _____ gpdpc, which occurred on _____.

12. Classification of water system:

- ☐ Class A system
- ☐ Class B system
- ☐ Class C system

13. Classification of water system by complexity of delivery (you may use more than one type):

- ☐ Haul
- ☐ Watering point
- ☐ Fill and draw
- ☐ Piped
- ☐ Circulating
- ☐ Utilidor

14. Major water system components in your system:

- | | |
|---|---|
| <input type="checkbox"/> Well | <input type="checkbox"/> Pressure filters |
| <input type="checkbox"/> Surface water pump | <input type="checkbox"/> Chlorination |
| <input type="checkbox"/> Dam | <input type="checkbox"/> Fluoridation |
| <input type="checkbox"/> Conventional treatment | <input type="checkbox"/> Iron removal |
| <input type="checkbox"/> Cartridge filters | <input type="checkbox"/> Other - _____ |

15. Classification of wastewater system:

- ☐ Level A
- ☐ Level B
- ☐ Level C
- ☐ Level D
- ☐ Level E

16. Major wastewater system components in your system:

- ☐ Lagoon
- ☐ Lift stations
- ☐ Manholes
- ☐ Piping
- ☐ Package plant
- ☐ Solids disposal
- ☐ Honey bucket haul vehicle and collection tanks
- ☐ Other - Describe _____

17. Mark those items that are presently being taken care of by management.

- ☐ Establishing and printing rules for customers.
- ☐ Proper, equitable rates for the use of water.
- ☐ Plans so that future needs can be met.
- ☐ Long term (5 to 10 year) budgeting requirements.
- ☐ Finances, including budgeting, collecting utility bills and paying encumbered bills.
- ☐ Worker safety program.
- ☐ To see that operators are properly trained.
- ☐ Proper record keeping system for water quality data, billing, budgets and operation data.
- ☐ Communicate with state, customers and operators the needs of the system and the conditions of the system.
- ☐ Developing and implementing a public relations / customer service program.

18. Mark those items that are presently being taken care of by operations.

- ☐ Properly trained
- ☐ Operating budget
- ☐ Inspect equipment
- ☐ Keep proper repair parts on hand
- ☐ Collect adequate samples
- ☐ Perform routine testing
- ☐ Repair broken equipment
- ☐ Prevent equipment breakdowns by performing preventive maintenance
- ☐ Keep water temperature correct
- ☐ Add proper chemicals in proper amounts
- ☐ Prevent contamination of water sources
- ☐ Prevent deterioration of water system
- ☐ Keep management aware of system problems
- ☐ Communicate with state, customers and management

Introduction & Overview

Exercise 3

SYSTEM EVALUATION

Comment	Yes	No
Our Operator(s)		
Maintain a chlorination system	<input type="checkbox"/>	<input type="checkbox"/>
Maintain a fluoridation system	<input type="checkbox"/>	<input type="checkbox"/>
Maintain gravity storage tanks	<input type="checkbox"/>	<input type="checkbox"/>
Maintain the distribution system, associated valves and hydrants	<input type="checkbox"/>	<input type="checkbox"/>
Perform our pump maintenance and repair	<input type="checkbox"/>	<input type="checkbox"/>
Measure chlorine residuals	<input type="checkbox"/>	<input type="checkbox"/>
Measure fluoride residuals	<input type="checkbox"/>	<input type="checkbox"/>
Operate and maintain the wastewater treatment system	<input type="checkbox"/>	<input type="checkbox"/>
Maintain the collection system, associated lift stations, manholes	<input type="checkbox"/>	<input type="checkbox"/>
Our System		
Has a properly running chlorinator	<input type="checkbox"/>	<input type="checkbox"/>
Has a properly running fluoridator	<input type="checkbox"/>	<input type="checkbox"/>
Submits Bac-T samples as required	<input type="checkbox"/>	<input type="checkbox"/>
Has developed and uses a daily work procedure checklist	<input type="checkbox"/>	<input type="checkbox"/>
Has a written preventive maintenance program	<input type="checkbox"/>	<input type="checkbox"/>
Has the appropriate tools to perform the required work assignments	<input type="checkbox"/>	<input type="checkbox"/>
Has an adequate spare parts inventory	<input type="checkbox"/>	<input type="checkbox"/>
Has adequate relief labor assistance available	<input type="checkbox"/>	<input type="checkbox"/>
Has a utility vehicle supplied by the tribe	<input type="checkbox"/>	<input type="checkbox"/>
Reimburses our operators for personal vehicle use	<input type="checkbox"/>	<input type="checkbox"/>
Our Utility		
Provides our operators with a budget to work within	<input type="checkbox"/>	<input type="checkbox"/>
Allows our operators to approve purchases within the budget	<input type="checkbox"/>	<input type="checkbox"/>
Has designated an official to approve purchases	<input type="checkbox"/>	<input type="checkbox"/>
Has designated a supervisor or manager for the operators to report to or discuss problems with	<input type="checkbox"/>	<input type="checkbox"/>
Understands what your system costs to operate and maintain	<input type="checkbox"/>	<input type="checkbox"/>
Charges a monthly user fee	<input type="checkbox"/>	<input type="checkbox"/>
Is successful in collecting fees (less than 25% delinquency rate)	<input type="checkbox"/>	<input type="checkbox"/>
Reports to the policy making body on a monthly or periodic basis	<input type="checkbox"/>	<input type="checkbox"/>
Has strong policy making body support for activities and goals	<input type="checkbox"/>	<input type="checkbox"/>
Sets aside reserve funds for future equipment replacement	<input type="checkbox"/>	<input type="checkbox"/>
Pays sufficient wages to attract and retain qualified operations and maintenance staff	<input type="checkbox"/>	<input type="checkbox"/>

Exercise 4

SYSTEM AUDIT

ORGANIZATION & MANAGEMENT

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a designated utility manager.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a designated primary operator.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a designated alternate operator.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are clear job descriptions for every employee.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are clear organizational charts showing the chain of command.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The backlog of work is calculated by the manager.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a water ordinance in place.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a sewer ordinance in place.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a computer available in the office.

COMMUNICATION

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are regular meetings between the operators and the manager.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a modem available in the office.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a phone in the water plant.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator(s) and the generator maintenance person communicate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a list of emergency phone numbers posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a list of technical support phone numbers posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A vendors list is posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a list of agency contacts posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are community meetings to discuss water/sewer issues.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are special sessions in the school to discuss water/sewer with the kids.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tours of the water/sewer facilities are given when requested.

TIME MANAGEMENT & QUALITY

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Workers performance and hours are reviewed regularly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Scheduling of tasks is done by following the PM plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Weekly jobs are prioritized.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Coffee breaks are kept to 15 minutes or less.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extra workers are used only when there is a safety concern or emergency work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Time cards are used to keep track of hours worked.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Incentives for raises are established.

PREVENTATIVE MAINTENANCE

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structures are well kept (on average).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment is well maintained (on average).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Buildings and equipment are inspected annually to identify maintenance needs and changes in the PM program.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A preventative maintenance program exists for the water system including daily, weekly, and monthly checklists.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A preventative maintenance program exists for the sewer system including daily, weekly, and monthly checklists.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A preventative maintenance program exists for the landfill including daily, weekly, and monthly checklists.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meter readings (water, electric, fuel, etc..) are analyzed for troubleshooting purposes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed PM records are filed in one location. An equipment history is maintained.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manufacturer's data is stored on site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment failure is analyzed for causes. The PM plans are revised regularly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Repetitive jobs are identified.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency repairs are less than 5% of the work in the facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The public facilities (bathrooms, showers, washers) are regularly cleaned and disinfected.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Garbage is regularly picked up.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work orders are used for large jobs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Written procedures exist for the use of work orders.

PURCHASING

yes no sort of ? D/A

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Equipment is purchased ahead of time.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alternatives for shipping are considered when ordering parts.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Items are reordered on a regular basis.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Every time a spare part is used a replacement is ordered.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are written procedures for purchasing.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Purchase orders are used when items are ordered.

INVENTORY CONTROL

yes no sort of ? D/A

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An up to date equipment list is kept.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When parts are used the list is updated.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Testing equipment and chemicals are always on hand.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only the operator has access to the tool box.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are sufficient tools on site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is adequate storage for spare parts, tools and supplies.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tools are not borrowed, or if they are there is a sign out sheet.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Once a year parts/tools that can no longer be used are sold, traded, or disposed of.

COST CONTROL

yes no sort of ? D/A

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Labor and materials cost are estimated before work is done. Accounting, management, and operations personnel communicate well
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Managers and operators meet regularly to discuss issues. The operator attends council meetings and presents a monthly report.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The annual budget is based on inspections, PM budget, and records. The budget is reviewed yearly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The village participates in the PCE program.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Electrical use in the washeteria is reported monthly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The washeteria has building insurance.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The washeteria has liability insurance.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A monthly financial report (system expenses and revenues) is presented to the Council.

Introduction & Overview

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rates are reviewed annually.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are written agreements with system users (i.e., homeowners, schools, businesses).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a separate banking account for the washeteria system.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a reserve account (savings) for unplanned purchases and emergencies.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The collection rate is over 85%.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a written policy with procedure for those who do not pay.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Users are billed at the same time each month.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The budget includes money for routine PM.

TRAINING

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The primary operator is certified.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The alternate operator is certified.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The manager has attended Utilities Management Training.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator is aware of correspondence classes and the operator lending library.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is money in the budget for operator training.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator has had on-site training.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator understands the system components.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Training needs are defined.

SAFETY

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a monthly safety meeting. The utility has a good safety record.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety equipment is used by the operator.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is an emergency response plan in place.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The health aid is aware of the chemicals that the operator is working with.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The MSDS (Materials Safety Data Sheets) are posted in the plant.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire extinguishers are checked regularly.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator has attended first aid & CPR training recently.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a well head protection plan in place for the water source.

ENGINEERING/PLANNING

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are land use ordinances in place.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System as-built drawings are on site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Capital development projects grant applications are completed ahead of the deadlines.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System O&M Manuals are on site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community involvement is high in projects.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Visioning and community priorities are well established.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Correspondence with different agencies is integrated.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The utility has a copy of the community comprehensive plan.

REGULATIONS

yes	no	sort of	?	D/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator is aware of system testing requirements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The manager is aware of system testing requirements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a system sampling plan in place.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Testing analysis records are kept in a central location.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New regulations sent out to the village re reviewed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The regulations are stored in one location.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator completes the monthly operator testing form and mails a copy to ADEC.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The operator has consistently done the required testing.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When required testing analysis is received from the laboratory, the results are analyzed and then stored in one location.

Introduction & Overview

Exercise 5

VALUE OF ASSETS

Purpose

To demonstrate to managers that they need to be familiar with the physical components of their system and how much their system is worth.

Format

Individual responses to be shared with the entire class.

Time Requirement

1:00

Resources Needed

This exercise will take preparation ahead of time. The manager should be asked to become familiar with the components in their system. The RMW's can help compile information. The exercise should be copied twice for each student. Once to complete in the class and once to take home and redo with the operator.

In addition to the system information for each community, you will need:

- Chart pack and pens.
- Calculators.

Background

Few managers have an appreciation for the cost or value of their sanitation system assets. Upon determining the value of the assets managers become aware of the importance of managing these facilities. This exercise may work best if used after the system assessment.

Activity

Each student should guess how much their system is worth and write this number on the top of the first page. Then they should fill in the three pages quantifying their system worth the best they can:

Start by placing a check mark in the first column for each item present in their system.

Enter the quantity of each item in the quantity column.

Calculate the value of item by multiplying the quantity of item by the unit cost.

Add up the values in the calculated value of item for each page and write the total at the bottom of the spreadsheet page.

Copy the page totals to the bottom of the last page and add them to come up with the total value for the system.

Calculate the value per person for the community by dividing the total value by the population.

Calculate the value per home for the community by dividing the total value by the number of homes.

After each person has done this work, write the following information (community name, system worth guess, total value, value per person, value per home) on a flip chart and discuss with the class. Ask the following questions

- How close was your guess on system worth?
- Are these numbers what you expected??
- Does this increase or reduce the importance of these facilities?

Emphasize that they have these facilities for health purposes. As a manager they need to know what physical assets they are managing and how much they are worth. Taking good care of the facilities means that they are protecting their investments (assets). State that they should go over this list again with their operator when they get home to see how accurate they are.

VALUE OF ASSETS – fill-in form

Utility name: _____

Your initial estimate of system worth: \$ _____

Now complete the three page form below for an estimate of the actual system worth.

These costs include materials and installation costs. These are round numbers for estimating purposes only.

	Unit	Quantity	Unit cost	Other	Value
Water source-surface water					
dam and reservoir (hydro electric)	each	_____	\$500,000.00		_____
river, creek, spring intake	each	_____	\$10,000.00		_____
submersible pump and controls	each	_____	\$1,000.00		_____
<hr/>					
Water source-ground water					
well	ft	_____	\$120.00		_____
submersible pump and controls	each	_____	\$1,000.00		_____
well heat tape and controls	ft	_____	\$8.00+ \$500 control		_____
<hr/>					
Water transmission & distribution					
utilidor - above ground (carrier)	ft	_____	\$50.00		_____
arctic pipe (carrier)	ft	_____	\$29.00		_____
water line - hdpe	ft	_____	\$1.50		_____
fire hydrants	each	_____	\$1,500.00		_____
heat tape on distribution line	ft	_____	\$8.00+ \$500 control		_____
circulating heat add - water or glycol	ft	_____	\$1.25		_____
large truck haul vehicle	each	_____	\$90,000.00		_____
small truck haul vehicle	each	_____	\$65,000.00		_____
<hr/>					
Water treatment					
hypochlorite (HTH) injection	each	_____	\$2,000.00		_____
chlorine gas	each	_____	\$17,000.00		_____
iron removal (KMNO4) injection	each	_____	\$2,000.00		_____
fluoride (NaF) injection	each	_____	\$2,000.00		_____
pressure sand filter, 36" diameter	each	_____	\$15,000.00		_____
greensand filter	each	_____	\$20,000.00		_____
micron/bag filter	each	_____	\$4,000.00		_____
coagulation (alum/polymer) injection	each	_____	\$20,000.00		_____
package treatment plant	each	_____	\$30,000.00		_____
<hr/>					

TOTAL COST OF ITEMS ON THIS PAGE:

\$ _____

Introduction & Overview

	Unit	Quantity	Unit cost	Other	Value
Water plant and washeteria					
building	sf	_____	\$300.00		_____
garage	sf	_____	\$50.00		_____
washers-top loaders	each	_____	\$2,000.00		_____
washers-front loaders, large	each	_____	\$1,000.00		_____
washers-front loaders, small	each	_____	\$1,000.00		_____
dryers-propane	each	_____	\$2,500.00		_____
dryers-hydraulic	each	_____	\$2,500.00		_____
dryers-electric	each	_____	\$800.00		_____
bathroom with shower/tub	each	_____	\$1,500.00		_____
bathroom without shower/tub	each	_____	\$1,000.00		_____
utility sink	each	_____	\$150.00		_____
watering point	each	_____	\$3,000.00		_____
pressure tank	each	_____	\$4,000.00		_____
pressure pump	each	_____	\$500.00		_____
circulation pump	each	_____	\$200.00		_____
fuel pump	each	_____	\$200.00		_____
boiler-190,000 btu	each	_____	\$4,000.00		_____
fuel storage tank-500 gallon	500gal	_____	\$1,500.00		_____
emergency heater	each	_____	\$800.00		_____
electrical panels and controls	each	_____	\$2,000.00		_____
lighting	each	_____	\$500.00		_____
ventilation	each	_____	\$500.00		_____
building plumbing-water and sewer pipes	each	_____	\$2,500.00		_____
water storage tank-steel exterior	gal	_____	\$3.00		_____
water storage tank-redwood stave	gal	_____	\$1.00		_____
water storage tank-steel interior	gal	_____	\$5.00		_____
backup generator	each	_____	\$10,000.00		_____
fire protection system	each	_____	\$3,500.00		_____
waste heat system	each	_____	\$12,000.00		_____
safety equipment	each	_____	\$2,000.00		_____
tools and testing equipment	each	_____	\$5,000.00		_____
meters	each	_____	\$300.00		_____
spare parts and supplies	each	_____	\$1,500.00		_____
TOTAL COST OF ITEMS ON THIS PAGE:			\$ _____		

Introduction & Overview

	Unit	Quantity	Unit cost	Other	value
Wastewater treatment					
community septic tank/leach field	each	_____	\$15,000.00		_____
package treatment plant	each	_____	\$50,000.00		_____
building	sf	_____	\$300.00		_____
disinfection system	each	_____	\$2,000.00		_____
Wastewater collection and disposal					
utilidor (carrier)	ft	_____	\$50.00		_____
arctic pipe (carrier)	ft	_____	\$29.00		_____
sewer line - hdpe	ft	_____	\$1.50		_____
manhole - concrete precast	each	_____	\$10,000.00		_____
manhole - other	each	_____	\$10,000.00		_____
lift station with duplex pumps, controls	each	_____	\$40,000.00		_____
wastewater haul vehicle-small	each	_____	\$90,000.00		_____
wastewater haul vehicle-large	each	_____	\$65,000.00		_____
sewage lagoon	sf	_____	\$6.00		_____
Other					
_____		_____	_____		_____

TOTAL COST OF ITEMS ON THIS PAGE:

\$ _____

When you are finished with the items on the worksheet, complete the following:

TOTAL COST OF PAGE 1 ITEMS	dollars	_____
TOTAL COST OF PAGE 2 ITEMS	dollars	_____
TOTAL COST OF PAGE 3 ITEMS	dollars	_____
SUM OF ALL COSTS	dollars	_____

POPULATION IN COMMUNITY	persons	_____
CALCULATED COST PER PERSON	\$/person	_____

HOMES IN COMMUNITY	homes	_____
CALCULATED COST PER HOUSE	\$/home	_____

Now compare these figures with your beforehand estimate at the top of page 1.

Introduction & Overview

Exercise 6

Time needed:

45 minutes

Materials needed:

Paper and pen for each person/group

Format:

groups of 3-5

Instructions:

From the experiences of the group members, each group should come up with one good example of each of the following:

The toughest village government policy or debacle they have had to deal with.

The worst utility customer they have had to deal with.

Each group should have a notetaker/spokesman describe each of the above incidents to the class, keeping names of people and villages out of the description. Also reported should be the effect on the utility and its customers, what if anything was done to deal with the situation. The class should then explore how good management techniques, planning, organizational structure, public relations etc., might help in these sorts of situations.

Spend 15-20 minutes in the groups coming up with the examples and their effects and the rest of the time with the full class discussion of what could have helped.

YOUR WORST NIGHTMARE

Introduction & Overview — Worksheet

1. The three legs of the “three-legged stool” supporting the village sanitation system are a _____, _____ and _____.
2. A rural Alaska utility manger might also have the title of: (list three) _____; _____; _____.
3. The five resources available to a utility manager are:
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
4. Complicating the operation and management of utilities in Alaska are: (name at least three) _____
5. The Alaska Department of Environmental Conservation (ADEC) is required to apply the _____ Act to all public water systems in the state.
6. Operator certification is required for all communities that have at least _____ connections or serve a population of _____.
7. Water and wastewater systems are designed to protect _____.
8. The two types of drinking water sources are
 1. _____
 2. _____

Introduction & Overview

9. Treatment systems are designed to remove or reduce _____ related contaminants and _____ contaminants.

10. Which of the following would not be part of the water distribution system?

- ___ a. Water meter on the line going to the School.
- ___ b. Community well.
- ___ c. Boardwalks in a community with a haul system.
- ___ d. Watering point on the outside of the Water Treatment Building.

11. Which of the following would not be part of the utility's wastewater collection system?

- ___ a. Sewage Lagoon
- ___ b. Toilet in a Customer's house
- ___ c. Lift Station
- ___ d. Pipes running from the School to the Lagoon

12. What are the five basic management components discussed in this course?

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Introduction & Overview – Worksheet & ANSWERS

1. The three legs of the “three-legged stool” supporting the village sanitation system are a
good physical plant , good operations and maintenance and
good management .
2. A rural Alaska utility manger might also have the title of: (list three)
city manger, administrator, mayor, chief, clerk, operator, superin-
tendent, public works director etc.
3. The five resources available to a utility manager are:
 1. Time
 2. Money
 3. People
 4. Assets
 5. Information
4. Complicating the operation and management of utilities in Alaska are: (name at least three)
extreme climate, high transportation costs, short construction sea-
son, etc....
5. The Alaska Department of Environmental Conservation (ADEC) is required to apply the Safe
Drinking Water Act to all public water systems in the state.
6. Operator certification is required for all communities that have at least 100 connections or serve
a population of 500 .
7. Water and wastewater systems are designed to protect public health .
8. The two types of drinking water sources are
 1. surface water
 2. ground water

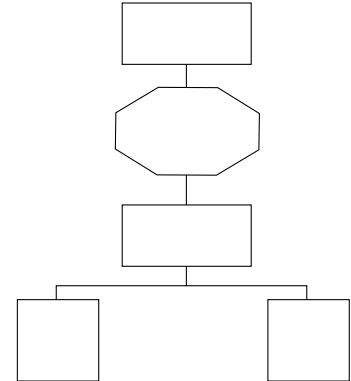
Introduction & Overview

9. Treatment systems are designed to remove or reduce health related contaminants and nuisance contaminants.
10. Which of the following would not be part of the water distribution system?
- ☐ a. Water meter on the line going to the School.
 - ☒ b. Community well.
 - ☐ c. Boardwalks in a community with a haul system.
 - ☐ d. Watering point on the outside of the Water Treatment Building.
11. Which of the following would not be part of the utility's wastewater collection system?
- ☐ a. Sewage Lagoon
 - ☒ b. Toilet in a Customer's house
 - ☐ c. Lift Station
 - ☐ d. Pipes running from the School to the Lagoon
12. What are the five basic management components discussed in this course?
- 1. organizational management
 - 2. planning management
 - 3. personnel management
 - 4. operations management
 - 5. financial management

Organizational Management

Key concepts to learn

- The definition of an organization
- How to design a customer-based utility organization
- Organizational structures and employee positions
- Components of a utility ordinance
- Components of customer agreements
- Roles of utility personnel
- How responsibilities are determined
- Relationship between authority and accountability
- The components of a customer-service/public relations program
- Components of a utility record keeping system
- Types and uses of utility records
- Considerations for organizing the work spaces of a utility
- The support agencies and associations dealing with utilities
- The function of regulations and how they affect utility management



Key terms to know

- | | |
|-------------------|---------------------|
| • Accountability | • Administrator |
| • Authority | • Customer |
| • EEO | • Efficiency |
| • Ordinance | • Operator |
| • Resolution | • Stakeholder |
| • Statute | • Utility Clerk |
| • Utility Manager | • Utility Ordinance |

Presentation Notes

Introduction, stakeholders

:20

overheads 1-5

This first sequence covers some very basic ground starting with “What is an organization?” Resist the temptation to skip or skim over these discussions; awareness of these principles will give the students a foundation on which to place the concepts to come throughout this course and beyond.

Stakeholders...It seems like everybody is a stakeholder, but some are *bigger* stakeholders than others. Show how it is good that there are so many stakeholders because being one motivates a person to look out for

Organizational Management

his interests. The management trick is to see that the stakeholders not merely seek the shortest route to their self-interest, but fulfill their responsibilities so that all stakeholders can reach their goals. Of course, the customer is at the top of the org chart.

Governments...In previous editions of this course, a fair amount of space was given to various forms of local governing systems in Alaska. This can be a distraction—it should not matter when one has a utility to run.

Level of Service

:20

overheads 6-9

This term and concept might be new and confusing to a good part of the class. Try to put it in simple terms, since it is a simple concept. If students are having trouble maybe they are assuming it is more complicated than it is. Try this illustration:

One person goes into a fast food restaurant and orders a hamburger. Another goes into a fancy restaurant and also orders a hamburger. They are both getting the same thing, right? Well, the one at the fancy restaurant will get a leaner burger with fresher lettuce and tomato, cheddar cheese instead of American and will also have it brought to him at a nice table. The level of service is clearly different, including the quality of the actual product. Also remind them that the second person will pay a lot more for that nice burger and service. Ask how many think the better burger and service is worth the extra price. Ask how many would think the fast food burger is good enough for them considering the savings. Then you can launch into the similarities of that scene with utilities and how communities must come to terms with what it is worth to them to “buy” a certain level of service.

Organizational Chart

:20

overheads 10-11

Again, this concept will probably be new to some students, so keep it simple. Remember this is an overview level course. Emphasize the usefulness of an organizational chart. Why should they draw one.

Ordinance

:20

overheads 12-14

A full treatment of the utility ordinance would take much longer than is allotted for this topic. After stressing the main points with the overheads, the ordinance exercise should raise awareness of the students’ own utility ordinances or lack thereof.

Customer Agreements

:20

overheads 15-19

At first is a general talk about what customer agreements are and why they are important. Then follows some more specifics about the two main agreements. The four additional agreements on overhead 19 are not covered much in the student guide, so this is a good chance to expose the students to them.

Important: Customer agreements can be called different names in different places, so when you first start talking about each one, try to bring everyone

together by making clear what it does and what other names it might be called (have students volunteer what agreements they use and what they call them).

Roles, Responsibility...

:20

This is perhaps one of the most important concepts of the entire course. It may not be as tangible or visible as periodic maintenance or the EPA or a written ordinance, but its currents flow just beneath the surface and carry these other elements of a utility along. Fortunately, it is not rocket science and common sense will allow most students to pick this up. Putting it into practice is another thing.

overheads 20-23 These first three overheads talk about what Roles, Authority, Responsibilities and Accountability are. The fourth seeks to show how the four facets relate to one another for a particular stake holder.

overheads 24-29 The balance of the time is available for going over what each stakeholders roles, etc., typically are, keeping in mind, of course, that there is no strict list to fit every situation.

Public Relations

:10

overheads 30-32 There is not much time available to talk about public relations, so make it a good sales pitch. Sell them on why public relations should be in every utility's tool bag. Then spend a few minutes on the tips and ideas and hopefully the seed will be planted and ideas given will lead to more.

Information and Work Space Management :10

These topics may seem like a new cure for insomnia, but how much waste and aggravation comes from neglecting them? The main thrust here is motivational.

overheads 33-34 Record keeping is important, and poor practices can get a utility (or any organization) into trouble. Emphasize that each utility needs to find a system that works for them, and the simplest one that will work is usually the best one. Remind them that if their current bookkeeper leaves a new person will have to be able to learn the new system quickly.

overheads 35-37 Work space management...The suggestions in this section are mostly principles rather than specifics; each utility has a different situation to start with and some do not have the luxury of an ideal setup. But with these principles and some creativity, they can make their situation more efficient.

Agencies and Regulations

:10

overheads 38-39 Managers are going to need to be able to communicate with and about a variety of organizations and agencies. People who have worked in the field seem to know them (but do they really?). People who are new are often confused by the alphabet soup, but seldom ask. Here's a chance to explain how the puzzle pieces fit together.

overheads 40-41 You can soften what seems like a negative topic by looking at both sides of

Organizational Management

the issue. Discuss why some of these regulations came into being and why it is in the utility's best long term interest to respect them.

Exercises

1:45

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

The students should have already read ahead through the Planning chapter by this time if you are following the sample schedule in the front of this book.

Exercise notes

Exercise 1

:20-:30

Who owns the Store?

A simple exercise but perhaps a necessary one. Filling in the chart should only take a few minutes, but already the students will be thinking about the implications of the results. Using this early in the course will lay a framework for much of the discussions to come. After filling in the chart, guide the discussion toward the point that the community as a whole, not the state, not the feds, owns and has the responsibility to manage and maintain the utility and its facilities.

Exercise 2

1:00

Organizational Chart

Some managers may be facing drawing an organizational chart for the first time, so some help may be needed. Remember to set a supportive tone and encourage participants to not be hesitant to lay out the state of their organization and any problems it may be having. This is the way to learn and help each other.

Exercise 3

:45

Utility Ordinance

This exercise asks students to compare their ordinance against a checklist provided. Some students may not even have an ordinance for their utility or may not have it with them and not be very familiar with it. If so, they can still benefit by working with a student who does. There is more to the exercise than doing the checklist. Try to answer this question: "How does

having an ordinance help the utility overcome common, and not so common problems?”

Exercise 4**:45 Stakeholder Responsibilities**

Although set up to be a team game, this exercise can also be a simple fill-in-the-blank sheet to be done individually. The main object is to learn or review which jobs go with which positions. Obviously there are some situations which could be argued for a different position than is on the answer key, but there's a good discussion starter, right? We don't want to imply there is only one way of doing things, but here are some tried and true standards.

Exercise 5**:30-:45 Record Keeping**

Record keeping is not something most people enjoy. Filing paperwork is easy to put off. This exercise is designed to make it simple to get started. After the students have done the activity, go over the answers. Then steer the discussion toward why good filing habits and record keeping are important. Show how they save time in the long run.

Exercise 6**:30 Agencies and Regulations**

It's difficult for anyone to keep up with the alphabet soup of government bureaucracy, especially if you do not deal with them regularly. This game will make it a little less tedious to learn. The real point to be made is not memorizing acronyms though, but being familiar with what some of the agencies do, and what they can do for a utility. Encourage the managers to get on the inside track with whoever can help them do their job. There is some truth to "I'm from the government and I'm here to help you."

Exercise 7**:15 Last Minute Rate Hike**

There is nothing like empathy, and you might evoke some with this nasty practical joke. Most people react strongly to the perception that they are being pushed around by the bureaucrats or that their views are not considered. The manager should take this to heart.

Exercise 8**:30-40 Public Hearing**

This exercise may be torturous for the panel group since the course is yet to cover many of the topics touched. The value is that the students will see the importance of being able to answer these sorts of questions and will be motivated to learn good responses for them during the remainder of the class. The exercise can be repeated at the end of the class to see how much improved the answers are, or it can be simply moved to any other spot in the course.

As with any role playing activity, the instructor(s) must moderate from time to time to keep things moving in the right directions.

Organizational Management

Exercise 1

WHO OWNS THE STORE?

Purpose

Raise awareness that the community is responsible for maintaining and operating sanitation facilities.

Type of Activity

This activity was designed as a group using open discussion. The exercise is designed to provide insight into ownership and maintenance responsibility for sanitation facilities.

Time Requirement

0:20-0:30, depending on amount of discussion.

Resources Needed

The following resources should be gathered prior to the start of this activity.

- Copy of the “Who Owns the Store?” blank sheet
- Copy of the “Who Owns the Store?” answer sheet
- Chart pack - at least one page - laid out similar to the exercise sheet
- Chart pack markers

Background

Who is responsible for the maintenance of sanitation facilities is of key importance to their long life. This exercise uses a matrix that shows who owns, pays for construction, operates and maintains various facilities in the community.

Construction of community facilities is almost always funded by state or federal funded programs. Operation and maintenance of facilities is almost always funded by local sources. This exercise is used to emphasize this point.

Activity

1. Handout the exercise sheet.
2. Give the participants a few minutes to look over the sheet.
3. Ask the participants to provide information on that which allows you to fill in the blanks. They can make notes on their page.
4. After completion of the data input hand out the answer sheet.
5. Open the floor to discussion. Remember - you want to drive home the point that the utility is responsible for the cost and performance of operation, maintenance and management of the sanitation facilities.

Additional Activity

If the mood is right you can ask who is going to pay for these facilities when they wear out. This is a good place to point out that if the utility puts in some of the cost, even a small amount, obtaining grant funds may be a lot easier. In this course we emphasize the collection of 10% of the value of the assets over the life of the assets. (\$2,000,000 of assets with a 40 year life = \$5,000 per year or \$416.00 per month.

WHO OWNS THE STORE? — fill in sheet

Who Owns the Store?				
Facility	Who Owns The Facility	Who Pays for Construction	Who Operates the Facility	Who Pays for Maintenance
School				
Clinic				
Sanitation Facilities				
Airport				
Local Government Offices				
Roads				
Heavy Equipment				
Fuel Tank Farms				

Organizational Management

WHO OWNS THE STORE? — fill in sheet answers

Who Owns the Store?				
Facility	Who Owns The Facility	Who Pays for Construction	Who Operates the Facility	Who Pays for Maintenance
School	State (DOE)	State (DOE)	State through School District budget	State (through School District budget)
Clinic	Local Entity	State or Federal Grants	Local Entity	Federal (IHS)
Sanitation Facilities	Local Entity	State or Federal Grants	Local Entity	Local Entity
Airport	State	State	State (Contract)	State (Contract)
Local Government Offices	Local Entity	State or Federal Grants	Local Entity	Local Entity
Roads	Local Entity	State or Federal Grants	Local Entity	Local Entity (Some State Assistance)
Heavy Equipment	Local Entity	State or Federal Grants	Local Entity	Local Entity
Fuel Tank Farms	Local Entity	State of Federal Grants	Local Entity	Local Entity

Exercise 2

ORGANIZATIONAL CHART

Purpose

Demonstrate organization structure and highlight management problems.

Type of Activity

This activity was designed for small groups (4 to 6) utilizing individual responses that are shared in small groups and then with the entire class.

Time Requirement

1:00

Resources Needed

The following resources should be gathered prior to the start of this activity.

- Chart pack - one page for each individual
- Colored pens - one set for each small group

Background

Organizational charts provide information on responsibilities, authority and lines of communications. A view of the organizational chart can provide a unique understanding to the problems of an organization.

Activity

Follow these steps:

1. Provide each individual with one page of the chart pack and one colored pen.
2. Direct them to develop an organizational chart of their utility. They are to start with the customer as the top box. - Allow 15 min.
3. Direct each participant to make a list of problems they see with the organizational chart and make a list of the good news about their chart.
4. Divide the participants into groups of 4 to 6. Give the following directions; review the charts of the members of the group including the problems and new items from their individual list. The group should make a list of any common problems or issues.
5. Direct each member to post their chart on the wall.
6. Ask all members to view all the charts.
7. Ask the following questions:
 - What common problems have been identified?
 - How can these problems be resolved?
 - What have we learned about the design of an organization?

Organizational Management

Exercise 3

UTILITY ORDINANCE

Purpose	Show why a utility needs a good complete ordinance
Type of Activity	This activity was designed for individuals that have a utility ordinance. If there are participants without a utility ordinance then this exercise may not be useful.
Time Requirement	0:45
Resources Needed	<p>The following resources should be gathered prior to the start of this activity:</p> <ul style="list-style-type: none">• One chart pack page per group• One set of colored chart pack pens per group• Copies of the ordinance and user agreement assessment form• If the participants have a copy of their utility ordinance that would be desirable
Background	The utility ordinance is a key element in preventing and solving customer and employee problems. Without a quality ordinance the utility does not have a foundation for the management of the utility. This activity allows individual members to compare their existing utility ordinance and customer agreements to a standard.
Activity	<ol style="list-style-type: none">1. Place the participants into groups of 4 to 6 people. Provide each group with one chart pack page and one box of colored pens.2. Direct each group to brainstorm customer based problems that occur with their utility that are not associated with water quality. List the problems on the chart pack.3. Provide each individual with a copy of the Utility Ordinance and user agreement assessment sheet below.4. Direct the participants to compare this standard to their existing utility ordinance.5. When completed each group is to compare their results with the problems identified. They are to ask themselves if an improved utility ordinance would solve any of these problems.6. Ask the following questions:<ul style="list-style-type: none">• What are some examples of problems that could have been prevented with an improved utility ordinance?• What problems were identified that could not be solved with an improved utility ordinance?• What have we learned about the importance organization?

UTILITY ORDINANCE - USER AGREEMENT ASSESSMENT FORM

Directions: For each item listed below determine if your ordinance or user agreements contains this provision.

Does your Utility Ordinance contain these items?

Item	Y	N
<u>General</u>		
1. Heading (Title)	<input type="checkbox"/>	<input type="checkbox"/>
2. Chapter #	<input type="checkbox"/>	<input type="checkbox"/>
3. Enacting clause	<input type="checkbox"/>	<input type="checkbox"/>
4. Key dates - The date it goes into effect and the date it expires	<input type="checkbox"/>	<input type="checkbox"/>
5. The method of passage	<input type="checkbox"/>	<input type="checkbox"/>
6. Signatures/dates - Showing that it was approved and when	<input type="checkbox"/>	<input type="checkbox"/>
<u>Utility Specific</u>		
7. Definition of the service areas, the type, and level of services to be provided by the utility	<input type="checkbox"/>	<input type="checkbox"/>
8. Definitions of the technical terms used in the ordinance	<input type="checkbox"/>	<input type="checkbox"/>
9. An administration section that describes the financial responsibilities of the utility and financial method(s) to be used by the utility	<input type="checkbox"/>	<input type="checkbox"/>
10. A description of the utility expansion policy and how it is applied	<input type="checkbox"/>	<input type="checkbox"/>
11. Procedures and requirements for new service connections to the utility	<input type="checkbox"/>	<input type="checkbox"/>
12. The specific responsibilities of the utility	<input type="checkbox"/>	<input type="checkbox"/>
13. The specific responsibilities of the customer	<input type="checkbox"/>	<input type="checkbox"/>
14. What actions and practices are prohibited (This includes not allowing cross-connection of the water system to a non-potable supply, not allowing the secondary sale of water and not allowing deliberate wastage of the water or sewer service)	<input type="checkbox"/>	<input type="checkbox"/>
15. Methods and procedures that will be used by the utility; for establishing charges and penalties, billing and collection, adjustments to bills, and process required to make application for a new service	<input type="checkbox"/>	<input type="checkbox"/>
16. A description of the procedure and method used by the utility for setting rates and establish the rate categories.	<input type="checkbox"/>	<input type="checkbox"/>
17. A description of the penalties for violation of the provisions of the ordinance	<input type="checkbox"/>	<input type="checkbox"/>

Organizational Management

Item		
User Agreement - Does your user new service agreement contain these items?	Y	N
18. A description of what work that will be performed in order to make the service connection; the types of materials to be used, and who will be performing the work	<input type="checkbox"/>	<input type="checkbox"/>
19. A statement of who is responsible for paying the cost of materials and labor for making the connection	<input type="checkbox"/>	<input type="checkbox"/>
20. Signatures of the customer and the utility representative that they have read, understand and agree to the contents of the agreement	<input type="checkbox"/>	<input type="checkbox"/>
Attachments	<input type="checkbox"/>	<input type="checkbox"/>
21. Copies of any Easements (if necessary) that need to be signed to provide the Utility Site control for main water/sewer lines, access for deliver/haul vehicles, etc.	<input type="checkbox"/>	<input type="checkbox"/>
22. If the Utility is doing the work, signed Right-of-Entry permits to allow the utility workers to legally enter the property	<input type="checkbox"/>	<input type="checkbox"/>
23. Construction specifications for connecting to the utility	<input type="checkbox"/>	<input type="checkbox"/>
User Agreement - Does your user agreement contain these items?	<input type="checkbox"/>	<input type="checkbox"/>
24. A description of the responsibilities of the customer including maintaining the plumbing and fixtures in their property, agreeing to pay for service, working with the utility during times of emergencies to effect repairs or conserve water, allowing utility personnel to inspect the parts of the system on the applicants property, and not to resell water.	<input type="checkbox"/>	<input type="checkbox"/>
25. The responsibilities of the utility including: providing potable water and/or safe sewage disposal, billing customers on a published schedule, providing reasonable access to the utility operations records.	<input type="checkbox"/>	<input type="checkbox"/>
26. Explanation of collections procedures for past due accounts.	<input type="checkbox"/>	<input type="checkbox"/>
27. Information about the customer needed by the utility to assist if collection actions should it be necessary.	<input type="checkbox"/>	<input type="checkbox"/>
28. Signatures of the customer and the utility representative that they have read, understand and agree to the contents of the agreement	<input type="checkbox"/>	<input type="checkbox"/>
29. Separate document showing rates and charges	<input type="checkbox"/>	<input type="checkbox"/>

Exercise 4

STAKEHOLDER RESPONSIBILITIES

Purpose

Raise awareness of roles and responsibilities.

Type of Activity

This activity was designed for groups of 4 to 6 using a game format.

Time Requirement

0:45

Resources Needed

This game can be played two ways:

1) game board method:

- Draw out an organizational chart, preferably about 17x22 inches, with boxes for the following stakeholders: customers; policy making body, utility manager, clerk, operator, and federal and state agencies. The boxes need to be large enough for the cards described below. Make one for each participating group. This can easily be reproduced on a chart pack page.
- Make one set of responsibility cards for each group. Make each card with one of the responsibilities from the right hand side of the stakeholder responsibility pages (following) on it. Put the number from the left column on each card. There should be 58 cards per set.
- Have one answer key for each participant.

2) The quicker alternative is to photocopy the responsibility pages that follow (the ones without the answers) and have the groups (or individuals) fill them out. Then provide the answer sheet.

Background

Identification of individual stakeholders responsibilities is an important issue with any organization. Because individuals in small organizations often wear more than one hat, they are often unclear about their individual responsibilities. This exercise is designed to help define who should be responsible for various tasks.

Activity

1. Select a dealer who will shuffle the cards and distribute them among the players. Each player is to stack the cards as they are dealt face down. They are not to look at the cards until it is their turn.
2. Starting to the dealer's left, the players, one at a time, will turn over one card and read the description to the group. The player then asks, "Who is responsible for this task?" The card is then placed face up in the appropriate box.
3. When the last card is in place, play is stopped and the time recorded. The first team completed is to add 10 points to their score. The second place team is to receive 5 points.
4. Once all teams are completed hand out the answer key.
5. Using the number on each card, the team scores the results based on the answer pages. Each team starts with 100 points and loses one point for each wrong answer. High score wins.
6. Summary discussion should be lead by the instructor. Ask:
 - What common problems have been identified?
 - How can these problems be resolved?
 - What have we learned about the division of responsibilities ?
7. If time allows, you can ask each group to brainstorm - using a chart pack page - the authority that each stakeholder should have. In addition, have them define how each stakeholder will be held accountable for their responsibilities.
9. Ask a spokesperson from each group provide their insights.

Organizational Management

STAKEHOLDER RESPONSIBILITIES – Questions

<u>#</u>	<u>Category</u>	<u>Responsibility</u>
01	_____	Add proper chemicals in proper amounts
02	_____	Apply for state or federal wastewater discharge permit and complying with all regulatory requirements
03	_____	Assist the manager in establishing an operating budget
04	_____	relieve the utility manger of mundane administrative tasks
05	_____	Prepare the draft budget
06	_____	Collect adequate samples
07	_____	Communicate with state, customers and management about the quality of service
08	_____	Communicate with state, customers and operators the needs and condition of the system
09	_____	See to it that the utility is in compliance with all regulations
10	_____	Comply with regulations
11	_____	Oversee day-to-day operations
12	_____	Deposit cash receipts and maintains records of cash transactions and location
13	_____	Develop and implement a public relations/ customer service program
14	_____	Draft plans so that future needs can be met
15	_____	Not overload the system with high water or sewer use

16	_____	Direct emergency repairs
17	_____	Establish and maintain record keeping systems of ordinances pertaining to the management, operation and financial components of the utility
18	_____	Establish and print rules for customers
19	_____	Establish and support a worker safety program
20	_____	Establish proper record keeping systems for water quality data, billing, budgets and operation data
21	_____	Establish short and long term (5 to 10 year) budgeting requirements
22	_____	Establishing regulations to assure that wastewater is handled and disposed of in a method that prevents the spread of disease and protects downstream users
23	_____	Establishing regulations to assure that water provided by public water systems is safe to drink
24	_____	Ensures fair treatment of customers
25	_____	Ensures fair treatment of vendors
26	_____	Ensures fair treatment of employees
27	_____	Maintain the financial solvency of utility
28	_____	Inspect equipment
29	_____	Keep management aware of system problems
30	_____	Keep water temperature correct

Organizational Management

31	_____	Maintain an inventory of proper repair parts
32	_____	Maintain budgeting, accounting and information management system
33	_____	Maintain customer billing, accounts receivable and accounts payable for all utility activities
34	_____	Maintain the integrity of the financial systems including budgets, collections utility bills and pay encumbered bills
35	_____	Maintain water quality records.
36	_____	Maintain customer records
37	_____	Maintain financial records
38	_____	Maintain legal files
39	_____	Verify authorization and accuracy of bills against the utility and signs checks
40	_____	Oversee the operation and management of the entire utility
41	_____	Pay for the services provided
42	_____	Perform routine testing
44	_____	Draft and submit plans
45	_____	Prepare meeting agendas and minutes
46	_____	Prevent contamination of water sources
47	_____	Prevent deterioration of the utility facilities
48	_____	Prevent equipment breakdowns by performing preventive maintenance
49	_____	Implement a preventive maintenance plan

50	_____	Provides guidance to the utility on what services they want to have provided
51	_____	Purchase parts and supplies for the utility
52	_____	Repair broken equipment
53	_____	Safety of employees
54	_____	See that operators are properly trained
55	_____	Set proper, equitable rates for water and wastewater service
56	_____	Set User rates and charges
57	_____	Set policy
58	_____	The quality of the service

Organizational Management

STAKEHOLDER RESPONSIBILITIES – Answer Key

#	<u>Category</u>	<u>Responsibility</u>
01	Operator	Add proper chemicals in proper amounts
02	Utility Manager	Apply for state or federal wastewater discharge permit and complying with all regulatory requirements
03	Operator	Assist the manager in establishing an operating budget
04	Utility Clerk	relieve the utility manger of mundane administrative tasks
05	Utility Manager	Prepare the draft budget
06	Operator	Collect adequate samples
07	Operator	Communicate with state, customers and management about the quality of service
08	Utility Manager	Communicate with state, customers and operators the needs and condition of the system
09	Policy Making Body	See to it that the utility is in compliance with all regulations
10	Operator	Comply with regulations
11	Utility Manager	Oversee day-to-day operations
12	Utility Clerk	Deposit cash receipts and maintains records of cash transactions and location
13	Utility Manager	Develop and implement a public relations/customer service program
14	Utility Manager	Draft plans so that future needs can be met
15	Customers	Not overload the system with high water or sewer use

16	Utility Manager	Direct emergency repairs
17	Utility Manager	Establish and maintain record keeping systems of ordinances pertaining to the management, operation and financial components of the utility
18	Utility Manager	Establish and print rules for customers
19	Utility Manager	Establish and support a worker safety program
20	Utility Manager	Establish proper record keeping systems for water quality data, billing, budgets and operation data
21	Utility Manager	Establish short and long term (5 to 10 year) budgeting requirements
22	Federal and State	Establishing regulations to assure that wastewater is handled and disposed of in a method that prevents the spread of disease and protects downstream users
23	Federal and State	Establishing regulations to assure that water provided by public water systems is safe to drink
24	Policy Making Body	Ensures fair treatment of customers
25	Policy Making Body	Ensures fair treatment of vendors
26	Policy Making Body	Ensures fair treatment of employees
27	Policy Making Body	Maintain the financial solvency of utility
28	Operator	Inspect equipment
29	Operator	Keep management aware of system problems
30	Operator	Keep water temperature correct
31	Operator	Maintain an inventory of proper repair parts
32	Utility Clerk	Maintain budgeting, accounting and information management system

Organizational Management

33	Utility Clerk	Maintain customer billing, accounts receivable and accounts payable for all utility activities
34	Utility Manager	Maintain the integrity of the financial systems including budgets, collections utility bills and pay encumbered bills
35	Operator	Maintain water quality records.
36	Utility Clerk	Maintain customer records
37	Utility Clerk	Maintain financial records
38	Utility Clerk	Maintain legal files
39	Utility Clerk	Verify authorization and accuracy of bills against the utility and signs checks
40	Policy Making Body	Oversee the operation and management of the entire utility
41	Customers	Pay for the services provided
42	Operator	Perform routine testing
44	Utility Manager	Draft and submit plans
45	Utility Clerk	Prepare meeting agendas and minutes
46	Operator	Prevent contamination of water sources
47	Operator	Prevent deterioration of the utility facilities
48	Operator	Prevent equipment breakdowns by performing preventive maintenance
49	Utility Manager	Implement a preventive maintenance plan
50	Customers	Provides guidance to the utility on what services they want to have provided
51	Utility Clerk	Purchase parts and supplies for the utility
52	Operator	Repair broken equipment

53	Policy Making Body	Safety of employees
54	Utility Manager	See that operators are properly trained
55	Utility Manager	Set proper, equitable rates for water and wastewater service
56	Policy Making Body	Set User rates and charges
57	Policy Making Body	Set policy
58	Policy Making Body	The quality of the service

Organizational Management

Exercise 5

RECORD KEEPING

Purpose

To show how easy it is to begin filing process by placing documents in broad categories.

Type of Activity

This activity was designed for small groups (4 to 6) using open discussion.

Time Requirement

:30-:45

Resources Needed

The following resources should be gathered prior to the start of this activity:

- One copy of each of the documents for each group. (not actual documents, only representations of them). You can make photocopies of the next three pages and cut small dummy documents right from those, or use the list to copy onto full size sheets for each dummy.
- 4 manila folders or envelopes for each group with category names on them.
- One package of small Post-it notes for each group.

Background

One of the major problems in most small utilities is the time consumed attempting to find a document or contacting someone to obtain a new copy of a document that can't be found. The flip side of this problem is the situation where everything that ever came to the office has been filed, but there is no basic organization to the filing system.

Using the set of documents and a suggested filing list the group must decide if the document be kept, and if it should, then which category should it be filed in?

Activity

Divide the participants into groups of four to six. Provide each group the necessary resources.

Give the following directions:

1. Sort the documents that you have been provided. Determine two things
 - a. Should this document be kept?
 - b. If yes, Where should it be filed?
2. If kept, put in proper file.
3. After the exercise has been completed, open the floor for discussion.

File Categories:

Financial

Legal

Management

Operations

List of Documents

Recently passed ordinance

Next years budget

O&M manual from the LMI pump vendor

Vendor list from PHS

Map of new collection system lines

Blueprint of washeteria

Original water right certificate

Letter from Fish and Game responding to your request to remove gravel from a stream

Operator certification certificate

Phone message from Scott Ruby at DCED

ADEC operator/manager training calendar

Customer complaint letter

Copy of grant application for VSW funds

Box of updates of the AAC from
Butterworth Company

Envelop from Publisher's Clearing House stating you
may be the next \$10,000,000 dollar winner

A notice from the State Department of Labor saying
that your employer ESC rate has been adjusted up to
3.35%

Report by US Fish and Wildlife Service on a recent
study in a nearby Wildlife Refuge

Packet of Information from the Alaska Municipal
League stating when/where the annual conference
will be, and a registration form

ADEC Sanitary Survey

Organizational Management

Exercise 6

AGENCIES & REGULATIONS

Purpose

Raise awareness of the different functions of agencies.

Type of Activity

This activity was designed for small groups (4 to 6) using a game format that promotes open discussion.

Time Requirement

30 minutes

Resources Needed

This game can be played two ways:

1) game board method:

- Draw out a game board, preferably about 17x22 inches, with boxes for the following organizations: ADEC; DOL; Office of the Governor; DCED; ANTHC; AWWMA; NRWA; DNR; PHS. The boxes need to be large enough for the cards described below. Make one for each participating group. This can easily be reproduced on a chart pack page.

- Make one set of responsibility cards for each group. Make each card with one of the responsibilities from the right hand side of the agencies responsibility pages (following) on it, and include the number from the left column. There should be 30 cards per set.

- Have one answer key for each participant.

2) The quicker alternative is to photocopy the agencies pages that follow (the ones without the answers) and have the groups (or individuals) fill them out. Then provide the answer sheet.

Background

There are a large number of organizations and agencies involved in water and wastewater utilities in Alaska. This can cause considerable confusion for the utility manager. Which agency does what, how? Who should I call about it? This exercise is designed to provide some level of clarity on this issue.

The exercise can be used by the instructor to evaluate the students understanding of agency responsibilities.

Activity

Divide the participants into groups of four to six. Provide each group the necessary resources.

1. Select a dealer who will shuffle the cards and distribute them among the players. Each player is to stack the cards as they are dealt face down. They are not to look at the cards until it is their turn.

2. Starting to the dealer's left the players, in turn, will turn over one card, and read the description to the group. The question is then asked "Which agency does this?" The card is then placed, face up, in the box that the group decides.

3. When the last card is placed play is stopped and the time recorded. The first team completed is to add 10 points to their score. The second place team is to receive 5 points.

4. Once all teams are completed hand out the answer key.

5. Using the number on each card, the team scores the results using the answer key. Each team starts with 100 points and has one point deducted for each incorrect answer.

6. Summary discussion should be lead by the instructor. Ask:

- What common problems have been identified?

- What have we learned about the duties and services of the organizations and agencies?

AGENCIES & REGULATIONS — QUESTIONS

#	<u>Agency</u>	<u>Activity</u>
01	_____	A professional organization composed of operators, managers, educators, engineers, state health personnel, consultants and equipment manufacturers.
02	_____	Administers the Americans with Disabilities Act
03	_____	Administers employment services
04	_____	Administers the state's fifty percent grant and state loan programs for the design and construction of water, wastewater and solid waste facilities for first class cities.
05	_____	Administers workers' compensation programs
06	_____	Administers unemployment insurance
07	_____	Advises in utility administration
08	_____	Provides assistance to rural water utilities on management and training issues, specializing in CCRs.
09	_____	Certifies water and wastewater operators
10	_____	Constructs sanitation facilities to serve American Indians and Alaskan Natives
11	_____	Can provide copies of the state and federal drinking water regulations
12	_____	Designs and constructs rural water, wastewater and solid waste facilities for second class or unincorporated communities or first class cities under 600 population
13	_____	Enforces laws and regulations dealing hours of work, wages and work conditions
14	_____	Enforces laws and regulations dealing with job safety

Organizational Management

15	_____	Funds health clinics in Native villages
16	_____	Manages the RMW Program
17	_____	Manages the RUBA program
18	_____	Has power to levy penalties for non-compliance with regulations
19	_____	Provides assistance to local governments
20	_____	Administers the EEO & AA programs
21	_____	Provides assistance in financial management
22	_____	Provides assistance in site control
23	_____	Sorts out water rights in Alaska
24	_____	Provides technical assistance
25	_____	Regulates the quality of drinking water provided by public water systems.
26	_____	Regulates wastewater disposal
27	_____	Has responsibility under the provisions of Public Law 86-121
28	_____	Enforces the Safe Drinking Water Act
29	_____	Provides water and wastewater treatment technique information
30	_____	Enforces water quality monitoring requirements

AGENCIES & REGULATIONS — ANSWER KEY

#	<u>Agency</u>	<u>Activity</u>
01	AWWMA	A professional organization composed of operators, managers, educators, engineers, state health personnel, consultants and equipment manufacturers.
02	Office of the Governor	Administers the Americans with Disabilities Act
03	DOL	Administers employment services
04	ADEC	Administers the state's fifty percent grant and state loan programs for the design and construction of water, wastewater and solid waste facilities for first class cities.
05	DOL	Administers workers' compensation programs
06	DOL	Administers unemployment insurance
07	DCED	Advises in utility administration
08	NRWA	Provides assistance to rural water utilities on management and training issues, specializing in CCRs.
09	ADEC	Certifies water and wastewater operators
10	ANTHC	Constructs sanitation facilities to serve American Indians and Alaskan Natives
11	ADEC	Can provide copies of the state and federal drinking water regulations
12	ADEC	Designs and constructs rural water, wastewater and solid waste facilities for second class or unincorporated communities or first class cities under 600 population
13	DOL	Enforces laws and regulations dealing hours of work, wages and work conditions
14	DOL	Enforces laws and regulations dealing with job safety

Organizational Management

15	ANTHC	Funds health clinics in Native villages
16	ADEC	Manages the RMW Program
17	DCED	Manages the RUBA program
18	ADEC	Has power to levy penalties for non-compliance with regulations
19	DCED	Provides assistance to local governments
20	Office of the Governor	Administers the EEO & AA programs
21	DCED	Provides assistance in financial management
22	DCED	Provides assistance in site control
23	DNR	Sorts out water rights in Alaska
24	ADEC	Provides technical assistance
25	ADEC	Regulates the quality of drinking water provided by public water systems.
26	ADEC	Regulates wastewater disposal
27	PHS	Has responsibility under the provisions of Public Law 86-121
28	ADEC	Enforces the Safe Drinking Water Act
29	ADEC	Provides water and wastewater treatment technique information
30	ADEC	Enforces water quality monitoring requirements

Exercise 7

QUICK RAISE IN RATES

Purpose

Raise awareness of the importance of public involvement in the rate setting process.

Type of Activity

This activity was designed for small or large group activity. It is a short term exercise used to make a point about raising rates and public relations.

Time Requirement

20 - 30 minutes

Resources Needed

The following resources should be gathered prior to the start of this activity:

- One copy of the memo shown below
- One envelope for each person - optional

Background

It is common practice for utilities to go through a detailed process of determining the need to raise rates. However, the customer is often left out of the communication loop. The first that they know about the rate hike is the new bill or notice they receive in the mail. This exercise is used to focus attention on the bad customer relations resulting from this type of activity.

Activity

Follow these steps:

1. While the class is on break place one copy of this memo on the desk of each participant. If available you can place this memo in an envelop. This improves the impact
2. Observe the reactions of participants. Allow sufficient time for them to react.
3. After a period of time, tell them that it was an exercise.
4. Ask - how did it make you feel? That is how the customer feels when they get hit with an increase in rates and did not have an opportunity to participate in the decisions that lead to the increase.
5. Ask, what could be done to prevent this problem?

Memo

From: Training Staff
To: Utility Management Course Participants
Date:
Subject: Cost of Course

Due to funding shortages, we are not available to pay for coffee and snacks throughout this course. To pay for these we are assessing a fee of \$15.00 per person.

Please pay by cash or check.

Exercise 8

PUBLIC HEARING

Time needed:

30-40 minutes

Materials needed:

Set up an area like a public hearing might be: audience chairs facing opposite the board or panel, who are preferably seated behind a table.

Format:

two groups

Instructions:

The setting is a public hearing in front of the utility board and manager of a small rural utility. Half the class will role play a collection of citizens from the village—they should whine and complain about the utility. The other group, the utility board and managers, should respond to the whines and complaints. The list of specific complaints to be aired is seen only by the audience group. After 10-15 minutes of back-and-forth, change places and let the other group ask their questions and the new board and manager answer the best they can. After both sides have asked and answered, take a few minutes to discuss what was learned. How did it feel to be under the spotlight? How can good policies and public relations lessen this type of inquisition?

[The questions for each group are on the following two pages]

PUBLIC HEARING — Group 1 questions:

1. Why do we have to pay monthly charges if we got a grant for the utility in the first place?
2. Why test the water every day? Face it, we could get by testing the water, say, every other day or every third day. Not that much is going to go wrong in two days – and it is going to save money
3. Why should we poor residents pay our utility bill when the school, fish processing plant and military base are here. They're rich, they can afford to pay the biggest share. In fact, why not all of it?
4. Who gave you the authority to raise my rates?
5. My pipes keep freezing. When are you going to come and fix the problem?
6. How did you come up with these rates...why are they so much higher than in Bethel?
7. When are we going to get a new washeteria? The old one is in pretty sad shape.

PUBLIC HEARING — Group 2 questions:

1. Why not just let the village corporation pay everyone's utility bills?
2. Why not just get another grant to pay for our monthly utility bills?
3. If someone isn't paying, why not just shut them off?
4. Why did you tear down my fence to put in a new water line and then not put the fence back up?
5. Can't we pressure the legislature to start a water cost equalization program?
6. I don't like the style of my water faucet inside my home.
7. I want to go back to using my old well and outhouse. Can you disconnect me?

Organizational Management

Organizational Management — Worksheet

1. An organization is composed of a group of _____ with a common _____.
2. A person or group who has a vested interest in outcome of utility matters is called a _____.
3. The success of a utility, or any service organization, is measured by how well it meets the _____.
4. The structure of a utility should be _____ of the type of local government that owns the utility.
5. The quantity and quality of service provided by a utility is called the _____.
6. The _____ establishes policy, approves budgets and establishes the level of service for the utility.
7. Overall responsibility for day to day operations lies with the _____.
8. In most utilities the utility clerk reports to the _____.
9. The _____ makes it easy to see the lines of communication and delegation in an organization.
10. The basic operating rules for the utility are found in the _____.
11. The two main customer agreements discussed in this lesson are:
 - a. _____
 - b. _____

12. The roles and responsibilities of specific individuals or groups can be found in the following documents:

- a. _____
- b. _____
- c. _____
- d. _____

13. Authority is defined by an individual's _____.

14. A utility manager is accountable to _____, _____, and often to _____.

15. In learning to delegate, managers must accept the fact that the work will often be done _____.

16. A good public relations program will _____ with better collections, fewer customer problems and _____.

17. The four main components of a record-keeping system are _____, _____, _____, and _____.

18. What are the four types of records maintained by a utility?

- a. _____
- b. _____
- c. _____
- d. _____

19. Three goals of work space management are accommodating _____, minimizing _____ of staff and allowing the staff to _____ their records, tools etc.

Organizational Management

20. For each of the agencies and/or associations listed below, identify which are regulatory (R), which are support (S) and which provide both (R/S).

- a. _____ DEC
- b. _____ AWWA
- c. _____ DCED
- d. _____ ADF&G
- e. _____ EPA
- f. _____ AWWMA
- g. _____ PHS
- h. _____ VSW
- i. _____ DOL
- j. _____ IRS

21. Regulations are in place to protect the public's _____ and _____, but they also must be built into _____, _____ and work schedules.

Organizational Management – Worksheet & ANSWERS

1. An organization is composed of a group of people with a common purpose.
2. A person or group who has a vested interest in outcome of utility matters is called a stakeholder.
3. The success of a utility, or any service organization, is measured by how well it meets the needs of the customers.
4. The structure of a utility should be independent of the type of local government that owns the utility.
5. The quantity and quality of service provided by a utility is called the level of service.
6. The policy - making body establishes policy, approves budgets and establishes the level of service for the utility.
7. Overall responsibility for day to day operations lies with the utility manager.
8. In most utilities the utility clerk reports to the utility manger.
9. The organizational chart makes it easy to see the lines of communication and delegation in an organization.
10. The basic operating rules for the utility are found in the utility ordinance.
11. The two main customer agreements discussed in this lesson are:
 - a. application for connection
 - b. agreement for service

Organizational Management

12. The roles and responsibilities of specific individuals or groups can be found in the following documents:

- a. job description
- b. utility ordinance
- c. organizational chart
- d. state and federal regulations

13. Authority is defined by an individual's immediate supervisor.

14. A utility manager is accountable to the customers, the policy making body, and often to state regulatory agencies.

15. In learning to delegate, managers must accept the fact that the work will often be done differently than they would do it.

16. A good public relations program will pay for itself with better collections, fewer customer problems and support for capital improvements.

17. The four main components of a record-keeping system are collection, storage, retrieval, and analysis.

18. What are the four types of records maintained by a utility?

- a. financial
- b. legal
- c. management
- d. operational

19. Three goals of work space management are accommodating customers, minimizing interruptions of staff and allowing the staff to organize their records, tools etc.

20. For each of the agencies and/or associations listed below, identify which are regulatory (R), which are support (S) and which provide both (R/S).

- a. R/S DEC
- b. S AWWA
- c. S DCED
- d. R ADF&G
- e. R/S EPA
- f. S AWWMA
- g. R/S PHS
- h. S VSW
- i. R DOL
- j. R IRS

21. Regulations are in place to protect the public's health and financial well being, but they also must be built into plans, budgets and work schedules.

Planning Management

Key concepts to learn

- Why it is important to plan
- Who should do the planning
- The steps in the planning process
- The use of visioning to define community goals
- The function of a comprehensive plan
- The purpose and methods used for site control
- The purpose and methods used for source protection
- The function of a master plan
- Three keys to a successful master plan
- The purpose and content of a capital improvement plan
- The purpose and content of project plans
- The purpose and content of an annual operations plan



TO DO

Key terms to know

- Comprehensive plan
- Force account
- Master plan
- O & M
- Variable cost
- Goals
- Life expectancy
- Objectives
- Fixed cost

Presentation Sequence

Background on planning :15

overheads 1-5

All of us like to know *why* we are learning something or expected to do something, so again this section starts by explaining the benefits of planning. It then goes into the levels of plans we talk about, utility level and community level. Things do not always appear so simple in real life. Leave room for a variety of situations and plans at all kinds of levels. Its best to get the students to talk about their community and any plans written or in the works there. Then try to bring these back into the framework this course lays down, maybe making things seem a little simpler after all.

Various Plans :30

overheads 6-11

Now its time to describe some of the more important plans, hopefully making a convincing case for each utility to write and update one of each.

Exercises 1:15

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

Assign the *Personnel management* and *Operations Management* chapters to be read for the next day's sessions. Encourage the students to write down any questions or pertinent experiences they have had in these areas.

Exercise notes

Exercise 1 :45 Master Plan/Level of Service

Everyone would like the best...if someone else is paying for it! The students may go a little crazy in describing what their customers want, but that makes the point doesn't it?. Make sure that point is made: level of service must be planned for, but people must come up with the level of service they are willing to pay for, not just what they want.

Exercise 2 :30 Project Plan

This exercise looks fairly simple, but does require (or build) a level of understanding, and some group consensus. Discussion can center on the how's and why's of project plans, what could go wrong with out a plan, or how would a plan help when the inevitable snag hits.

Exercise 3 :30 Which Plan to use

This simple activity shows some usefulness plans can be put to: answering specific questions. It also makes students become away of what plans address what topics. Again, exposure to the concepts and familiarity with the basic plans (or sections of a more simplifies plan scheme is the goal.

Exercise 4 :30-40 If Only We Could Go Back

Here is another chance to vent and compare notes with other managers. It also will raise awareness as to what could go wrong and how good planning might protect the utility. Keep the students focused on using examples as a learning tool, not story telling competition, and be sure to keep the people and villages involved as anonymous as possible .

Planning Management

Exercise 1

MASTER PLAN/LEVEL OF SERVICE

Purpose	Develop and awareness of what constitutes level of service and how it effects planning.
Type of Activity	This activity was designed for small groups 4 to 6. This exercise is designed to develop awareness of the need to define level of service in a utility.
Time Requirement	45 Minutes
Resources Needed	<p>The following resources should be gathered prior to the start of this activity:</p> <ul style="list-style-type: none">• Chart pack• One set of colored markers for each group of 5• Set the room so groups of 4 to 6 can set around a table
Background	Defining the level of service is an essential step in developing the utilities budget and rates. This issue is a key to the utility master plan as well as the annual operating plan. In addition, this can be an important element in selecting which type of sanitation facility to build because it effects the O&M cost.
Action	<p>Use the information above to set the stage. Focus on those elements of the service that the community has control over.</p> <p>Each group is to use two sheets of paper. On the first one they are to describe the ideal level of service they believe their customers want.</p> <p>On the second sheet they are to identify what is the minimum level of service their customers will accept.</p> <p>Print the price list below and provide it to each member of the group.</p> <p>Direct the groups to establish a cost for the two levels of service which they have identified. Use a system size of 100 customers (connections not population).</p> <p>After each group has finished. Hang the pages on the wall. Have each group share their information.</p> <p>Ask the following questions:</p> <ul style="list-style-type: none">• What have we learned about level of service?• How does this relate to planning?
Cost	<p>Remember the focus is on basic understanding.</p> <p>\$8.00 to \$15.00 per hour for operator labor - Use \$12.00</p> <p>\$7.50 to \$12.00 per hour for clerk labor- Use \$10.00</p> <p>\$ 20.00 per hour for overhead cost to have the office open</p> <p>\$3.00 per customer to process a bill and receipt</p>

Exercise 2

PROJECT PLAN

Purpose

Provide an awareness of the steps in project planning.

Type of Activity

This activity was designed for small groups 4 to 6 using a list of common project steps. The groups arrange the steps in proper order. The goal is to focus attention on the need to plan projects rather than respond to projects.

Time Requirement

30 Minutes

Resources Needed

The following resources should be gathered prior to the start of this activity:

- List of project steps - Cut into individual pieces.
- One chart pack page for each team.
- Tape to fasten the pieces to the chart pack.

Background

The lack of planning for individual projects is a major problem in many small communities. The first step in planning usually does not start until materials, equipment or personnel arrive at the site. This exercise is designed to focus attention on the need to plan the project steps.

Activity

Follow these steps:

1. Divide the participants into their groups.
2. Handout copies of the project steps - cut into individual pieces, one chart pack page, and roll of tape to each group.
3. Using the above background information give the following directions:
 - Arrange the project steps in proper order
 - Once the group has agreed on the order of the steps, tape them to the chart pack page.
 - Alternatively, fill in the order of the steps on the sheet as it is.
4. When all groups have completed - tape the chart pack pages to the wall.
5. Open the floor to discussion.

Planning Management

PROJECT PLAN — Work Sheet

- _____ Project underway - inspection, meetings for clarification, etc., changes, etc.
- _____ Hold meetings to clarify project scope, level of service, personnel issues, etc.
- _____ Update planning documents
- _____ Identify grants for highest priority projects - source and available amounts
- _____ Begin operation
- _____ Implement any new management systems required by the project
- _____ Develop time lines set up construction management
- _____ Receive notice of receipt of grant
- _____ Assign responsibilities - for overall management
- _____ Hold public meetings - inform residents of project and time lines
- _____ Final inspection, sign off
- _____ Use the Master Plan and Capital Improvement Plan to select the next project
- _____ Apply for grant
- _____ Begin work - design & construction

PROJECT PLAN — Answer Sheet

1. Use the Master Plan and Capital Improvement Plan to select the next project(s)
2. Identify grants for highest priority projects - source and available amounts
3. Hold meetings to clarify project scope, level of service, personnel issues, etc.
4. Apply for grant
5. Receive notice of receipt of grant
6. Assign responsibilities - for overall management
7. Develop time lines set up construction management
8. Hold public meetings - inform residents of project and time lines
9. Begin work - design & construction
10. Implement any new management systems required by the project
11. Project underway - inspection, meetings for clarification, etc., changes, etc.
12. Final inspection, sign off
13. Begin operation
14. Update planning documents

Planning Management

Exercise 3

WHICH PLAN TO USE

Purpose

To help managers understand what plans contain what information. By creating this understanding, the need for the different types of plans may be increased.

Format

small groups.

Time Requirement

0:30

Resources Needed

- Question Sheet
- Answer Sheet

Background

As outlined in this text, there are seven different types of planning documents a Utility should have, or be a part of. Each plan has different uses, and contains different levels of information. By increasing the understanding of the plans, managers are more likely to advocate for them, and use them once they are completed.

Activity

Follow these steps:

1. Have the students assemble in their small groups. Hand out the question sheet.
2. Allow 20 minutes for the groups answers the questions.
3. Pass out the answer sheet and go over the questions.

There may be more than one correct answer for each question. Because the plans overlap in detail, it is usually the level of detail that is different. The answer listed is usually the “best” or first place to look.

WHICH PLAN TO USE — Question Sheet

Assume your community has completed all seven plans. For each question, enter the letter of the plan that you would be the best place to look up the requested information.

A - Community Comprehensive Plan
B - Utility Project Plan
C - Annual Operations Plan
D - Site Control Plan

E - Utility Master Plan
F - Utility Capital Improvement Plan
G - Source Protection Plan

- ___ 1. How many new connections are anticipated this year?
- ___ 2. How wide and long is the gravel pad for the new water tank that is being built?
- ___ 3. What is the highest capital construction priority for the utility?
- ___ 4. What is the highest capital construction priority for the community?
- ___ 5. When the new HUD houses are built in 2 years, will we need to expand the sewage lagoon?
- ___ 6. Where are the new houses most likely to be built?
- ___ 7. Are there any sources of pollution near the site proposed for the new well?
- ___ 8. What will be built first the expanded lagoon or the new water line down 1st Street?
- ___ 9. Who holds title to the land under the Washeteria?
- ___ 10. Where is the funding coming from for the proposed new water line down 1st Street?
- ___ 11. How many hours should the office be open a day/week?
- ___ 12. What size is the pipe coming out of the new water tank?
- ___ 13. Is the proposed location of the new fuel tank farm going to effect the water well?
- ___ 14. How many gallons per month does the washeteria use?
- ___ 15. What is the name of the company supplying the steel tank panels for the new water tank?
- ___ 16. After the new HUD houses are built and the system is expanded will we need to hire another full-time operator?
- ___ 17. Do we have the legal right to bury a new water line along 1st Street?
- ___ 18. How many new houses are going to be built over the next 5 years?
- ___ 19. What type of water source do we have surface or subsurface?

WHICH PLAN TO USE — Answer Sheet

A - Community Comprehensive Plan
B - Utility Project Plan
C - Annual Operations Plan
D - Site Control Plan

E - Utility Master Plan
F - Utility Capital Improvement Plan
G - Source Protection Plan

- C 1. How many new connections are anticipated this year?
- B 2. How wide and long is the gravel pad for the new water tank that is being built?
- F 3. What is the highest capital construction priority for the utility?
- A 4. What is the highest capital construction priority for the community?
- E 5. When the new HUD houses are built in 2 years, will we need to expand the sewage lagoon?
- A 6. Where are the new houses most likely to be built?
- G 7. Are there any sources of pollution near the site proposed for the new well?
- E 8. What will be built first the expanded lagoon or the new water line down 1st Street?
- D 9. Who holds title to the land under the Washeteria?
- F 10. Where is the funding coming from for the proposed new water line down 1st Street?
- C 11. How many hours should the office be open a day/week?
- B 12. What size is the pipe coming out of the new water tank?
- G 13. Is the proposed location of the new fuel tank farm going to effect the water well?
- C 14. How many gallons per month does the washeteria use?
- B 15. What is the name of the company supplying the steel tank panels for the new water tank?
- E 16. After the new HUD houses are built and the system is expanded will we need to hire another full-time operator?
- D 17. Do we have the legal right to bury a new water line along 1st Street?
- A 18. How many new houses are going to be built over the next 5 years?
- G 19. What type of water source do we have surface or subsurface?

Exercise 4

IF ONLY WE COULD GO BACK

Time needed

30-40 minutes

Materials needed

Note paper, pen or pencil for each group

Format

groups of 3-5

Instructions

Each group is to come up with one or two good examples of planning disasters— either how poor plans or lack of planning caused a utility problem or potential problem. Discuss within the group how good planning could have avoided the problem, including, as appropriate, estimates of dollars or man-hours that could have been saved. After 15-25 minutes, reconvene as a class and listen to and discuss each example, or as many as time allows. As in any of the exercises dealing with examples of mistakes, no names or places should be mentioned. Use a different person to report the problem than came up with it if need be.

Planning Management

Planning Management – Worksheet

1. Plans can vary widely in level of _____.
2. There are two levels of plans that impact a utility. They are:
 - a. _____
 - b. _____
3. Planning allows the utility to _____ the needs of the _____.
4. Planning allows _____ to provide input on how the utility should operate and grow.
5. Planning allows the utility to protect the _____ it has in its _____.
6. The general steps in plan development are:
 - a. Determine the _____ for the plan
 - b. Gather pertinent _____
 - c. _____ the information
 - d. Establish _____
 - e. Make a _____
 - f. Provide _____ and adjust the plan
7. The authority to develop any community or utility plan must come from the _____.
8. The Comprehensive Plan is a _____ – wide plan.
9. The two most important utility specific plans a utility should put their effort into are the _____ and the _____.
10. The purpose of a Master Plan is to establish _____ direction for the utility.

11. In order for a Master Plan to be successful it must
- a. be consistent with the _____ plan
 - b. be developed with _____ input
 - c. be focused on meeting the _____ needs
12. Purchasing land for utility infrastructure use is one method of _____
13. Site control and source protection are addressed in the comprehensive plan because they are both _____ issues.
14. A groundwater system source protection plan is called a _____ protection plan.
15. The capital improvement plan must be approved by the _____ .
16. The annual utility operations plan contains the following components:
- a. Utility _____ for the year and level of _____ to be provided
 - b. Projected _____ of water to be treated/delivered
 - c. Expected changes in the _____ of service connections
 - d. _____ resources required
 - e. _____ requirements
 - f. Estimates of _____ and _____ costs
 - g. Description of _____ and _____ projects

Planning Management

Planning Management — Worksheet

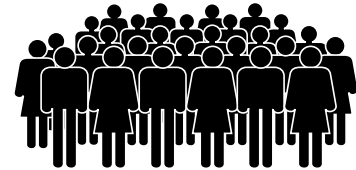
1. Plans can vary widely in level of detail.
2. There are two levels of plans that impact a utility. They are:
 - a. community wide
 - b. utility
3. Planning allows the utility to anticipate the needs of the customers.
4. Planning allows customers to provide input on how the utility should operate and grow.
5. Planning allows the utility to protect the investment it has in its as-sets.
6. The general steps in plan development are:
 - a. Determine the reason for the plan
 - b. Gather pertinent information
 - c. analyze the information
 - d. Establish alternatives
 - e. Make a decision
 - f. Provide feedback and adjust the plan
7. The authority to develop any community or utility plan must come from the community.
8. The Comprehensive Plan is a community – wide plan.
9. The two most important utility specific plans a utility should put their effort into are the master plan and the annual operations plan.
10. The purpose of a Master Plan is to establish long range direction for the utility.

11. In order for a Master Plan to be successful it must
 - a. be consistent with the comprehensive plan
 - b. be developed with customer input
 - c. be focused on meeting the customer's needs
12. Purchasing land for utility infrastructure use is one method of site control.
13. Site control and source protection are addressed in the comprehensive plan because they are both land use issues.
14. A groundwater system source protection plan is called a wellhead protection plan.
15. The capital improvement plan must be approved by the policy making body.
16. The annual utility operations plan contains the following components:
 - a. Utility goals for the year and level of service to be provided
 - b. Projected quantity of water to be treated/delivered
 - c. Expected changes in the number of of service connections
 - d. Financial resources required
 - e. Labor requirements
 - f. Estimates of fixed and variable costs
 - g. Description of capital and special projects

Personnel Management

Key concepts to learn

- How to make the most of available resources
- How to categorize behavior without labeling
- How values impact behavior
- Good leadership and management traits
- How expectations affect performance
- What motivates employees
- Why, when and how to delegate
- What makes a good employee policies manual
- What makes a good safety program
- How to use feedback to effectively communicate



Key terms to know

- Delegation
- EEO
- Grievance
- Motivation
- Values
- Discipline
- Feedback
- Leadership
- Policy

Presentation Sequence

Introduction

:10

overheads 1-3

The best things in life usually have a high cost. Dealing with people certainly fits that statement. By repeating not only the necessity of skillfully managing a staff, but the deep rewards that come from truly helping people, this topic can take on balance and meaning.

Leadership and Management skills :30

overhead 4

This is the meat of the matter of how to manage people.

Step one is to understand people and what drives them. Of course one could study this for years and not fully understand it, but the concepts included here can be a big eye-opener for those who have never heard them, and have a immediate impact on management style.

overhead 5

Managers should not fear conflict, but use it as an avenue to better understanding. The trick is to deal with it in a timely manner and with as little emotion as possible.

overheads 6-7

Leadership is somewhat nebulous and depends partly on natural ability.

Good management is identifiable and learnable. Good management also inspires staff to follow. Some functions and characteristics of good management follow. Can the class comment or expand on them?

overheads 8-10 Motivation and delegation go hand in hand. The manager who has trouble motivating may feel if he or she delegates work it will not get done. The manager who does not give staff challenging assignments has already demotivated them.

If delegation is hard for a manager, maybe they need to re-examine their personality and behavior styles in this light. The exercise for this is highly recommended for the whole class.

Personnel & Safety Manuals :20

overheads 11-15 Manuals are seen as a pain to some. How can you help them see them as useful tools. This section can work from that angle, then go into the specifics of what should go into the two basic manuals.

Communication :20

overheads 16-19 This is a crucial section, so do what you need to do to make sure the students are concentrating and receptive. You might consider at least a short break before, or play the *Communication Gap* game before as a way of raising awareness of the difficulties of communication. You also can tie in the information on behavior styles from the earlier exercise.

Exercises 2:00

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

The students should have already read ahead through the *Operations Management I & II* chapters by this time if you are following the sample schedule in the front of this book.

Exercise Notes

Exercise 1 :30 Employee Problems

Employee problems are one of the most common, and most aggravating,

Personnel Management

problems faced by a utility manager. Unfortunately, there are few easy answers, and this exercise certainly will not provide many. What it will do is allow students to become aware of the range of problems that can hamper operations. Let them share their painful stories and compare notes (being sure to protect anonymity as best as possible). Then, without trying to get too detailed, explore how some of the concepts in this class (some still to come) could ease the situation. Later in the lesson, you can refer back to some of these problems and present a solution.

Exercise 2 :30 Behavior Styles

Although this is a highly abbreviated form of the Marston Personality Theory, it is a good start to understanding difference which incline people toward different behaviors and responses. Encourage students to pursue this further with a good book if they are interested. The current objective is to expose them to the idea that differences in personality go to a very deep individual level and strongly influence our home and work life. We must learn to understand and take into account our own and others' differences, without "labeling" them.

Exercise 3 :30-1:00 Values Clarification

It's not the place of this class, or the utility, to judge the values of others—we need to respect the differences. We also need to understand how these differences often bring on conflict.

Exercise 4 :30 Values and Decision Making

This fun game will drive home the point that good communication does not happen with just a one way exchange. Clown it up a little like a good TV game show host.

Exercise 5 :30 Behavior vs Motives

It's a fine line to walk between managing and stepping on toes. Managers, and everyone really, must learn to keep emotions out of it. Learning not to judge motives or label people is a good first step. Remind students that this takes years of practice and even then we all mess up now and then. Some of the exercise questions are a bit gray, but as always, use these issues for discussion.

Exercise 6 :30 Motivation

It's dangerous to make assumptions, and in the case of what motivates workers we would likely be wrong. The point of this exercise is that without asking, we may *not* know. Different things motivate different people. Sometimes the things that will make a big difference for productivity are inexpensive or free. There are ample avenues for discussion of this important concept.

- Exercise 7** **:30-:45 Personnel Policy and Safety Program**
- For some, this will be a comparison of their documents with the checklists. For others it will be an education in what they should put in theirs, if they have one. Discussion can center on why certain elements need to be included, or on common problems of questions. Encourage students to take the checklists back to their utility for further refinement.
- Exercise 8** **:20+ Manager's Self Evaluation**
- Its never fun to look in the self-critical mirror, but it can help. Ask a few people to share some insights gained. Encourage all the students to think about the items and keep the form for future reflection.
- Exercise 9** **:30 Small Win**
- A reading and discussion opportunity that can stretch the definition of what is possible with a bit of pride and elbow grease. Remember to center on the attitudes and opportunities taken by the people in the story, not so much the specifics.
- Exercise 10** **:30 EEO/AA**
- The point of this quiz-based activity is not grade the students on their knowledge but to make them aware of the knowledge that is becoming more and more important in the modern workplace. Doing the answer sheet as a group may help to put them at ease. Reassure them that there is no one who knows all about these laws and court decisions, but they need to be as versed as possible.
- Exercise 11** **:30 The Communication Gap**
- This fun game will drive home the point that good communication does not happen with just a one-way exchange. Clown it up a little like a good TV game show host.
- Exercise 12** **:30 Best Communication**
- The purpose of this simple exercise is to improve the efficiency of communication. Modern technology has opened many new ways to communicate. Knowing when to use them and when not to use them is a mark of a good manger.
- The goal is to develop good judgement and flexibility. The main thing is not to duck responsibility when direct communication is required, and avoiding missed or too-late communication. There are several possibilities for many of the examples and some require following up an initial communication with another type of message.
- Exercise 13** **:30 What would *you* do?**
- It's a pretty good bet that the students will face situations just like these on the job—if they haven't already. Discussing tactful ways to resolve them will make it that much easier when they do come up.

Personnel Management

Exercise 1

EMPLOYEE PROBLEMS

Purpose

Provide participants an opportunity to vent their frustration with employee problems.

Type of Activity

This a group activity lead by the instructor. The activity can be used as an ice breaker and as an introduction to the lesson.

Time Requirement

0:30

Resources Needed

One or more blank flip chart pages

Chart pack pens

Background

Because this lesson does not directly provide information on how to resolve employee problems the participants may become frustrated during the lesson. By identifying the problems first and then during the presentation, referring to how they might be solved using the material in the manual will reduce this frustration.

Remember, an organization that is not organized, does not have a personnel policy, does not have a safety program and there are no clear guidelines for responsibilities, authority, or accountability will have employee problems.

Also, some employees - the 5% group - will always be a problem. It is important that the participants focus their energy on how to meet the needs of the remaining 95%. The 5% group can be terminated or they will change their ways if the organization has clear policies and procedures, clear identification of responsibilities, authority and acceptability.

Activity

Follow these steps:

1. Tell the participants you know they have or have had some personnel problems. Ask them to recall the type of problems that they are or have been confronted with. Place the issues on a chart pack page for all to see.
2. An alternate - Divide the participants into groups of 4 to 6 people. Have each group identify 6 to 10 common employee problems. Then summarize these on a chart pack page.
3. Acknowledge that employee problems exist. Then at the conclusion of each section of the presentation go to the chart pack and identify how this information, personality styles, values, motivation, leadership, personnel policies, etc., could be used to resolve or prevent the problem.

Exercise 2

BEHAVIOR STYLES

Purpose

Provide participants an insight into their personality style.

Type of Activity

This is an individual activity using scoring tools based on the Marston theory of personality style.

Time Requirement

:30

Resources Needed

Print one copy of each of the following for the each participant:

- Four-Style Behavior Questionnaire
- Compensating for Differences in People

Background

This is not a validated exercise. However, after using it for a number of years and comparing the results to more formal tools the author is convinced that the tool provides a high degree of accuracy.

It is important that this issue not be taken too seriously. Just have fun with the concept and allow people to explore their style.

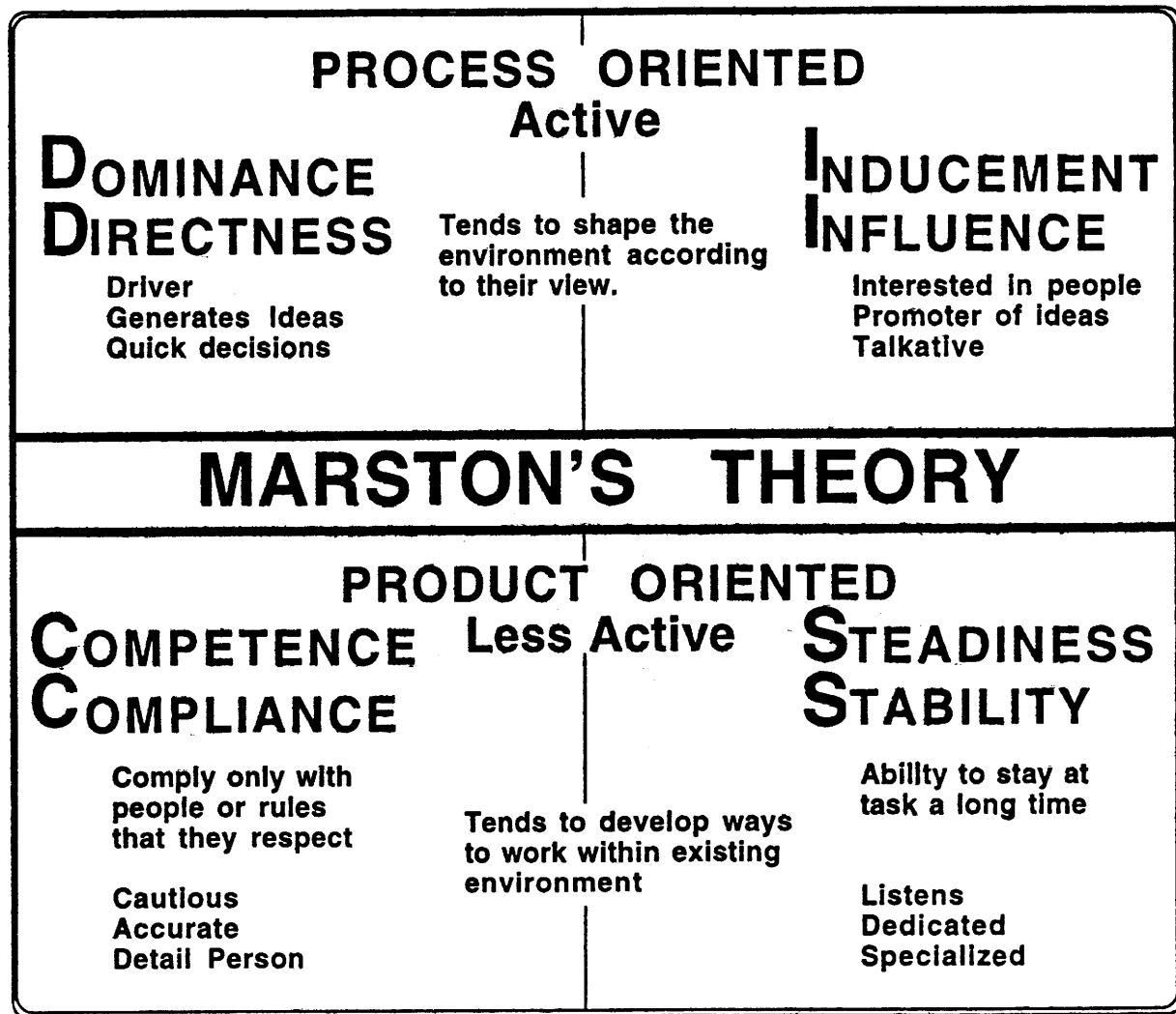
Remember, we are not our behavior. So don't say, "You are a 'D' personality." Instead say, "You are exhibiting 'Dominate' behavior."

This exercise is based on the Marston theory. His theory placed the behavior of normal people along two axis. One axis describes how we see the world, supportive or hostile. The second axis describes how we react to the world, active or less active. A person who sees the world as hostile and responds in an active way portrays dominate behavior. A person who sees the world as hostile and responds less active portrays compliance behavior. A person who sees the world as supportive and responds in an active way portrays influencing behavior. And a person who sees the world as supportive and responds in a less active way portrays steady behavior.

Activity

1. Hand out the Four-Style Behavior Questionnaire.
 2. Place a copy of this questionnaire on the overhead projector.
 3. Explain that this is a simple exercise that allows an individual to place themselves into Marston's Theory. The exercise is based on a list of 5 adjectives that describe normal behavior. From each box, each person is to select the adjective that most describes their behavior and rate this as a 7. The adjective that is least like the person is rated as a 1. The other two adjectives receive either a 3 or a 5.
- Instruct the participants to view their behavior on the job. This is because our behavior may be different at work than at home or in a social setting.
4. Use your self as an example. Use the first box and ask the participants to select the adjective that best describes you. Then ask for the one that least describes you. This is a good ice breaker. Once the group appears comfortable allow the group to score the exercise.
 5. Once all of the participants are completed you can allow them time to share their scores if they want. Do not require anyone to share their score.
 6. Hand out the Compensating for Differences in People sheet. Place a copy on the overhead projector.
 7. Review the description, strengths and weaknesses of each style. Focus the most attention on what each style needs to be effective.
 8. Debrief by asking what they have learned about different styles.

BEHAVIOR STYLES — Marston's Theory



BEHAVIOR STYLES — Questionnaire

Step One

In each of the five boxes below, examine the four descriptive adjectives as they may or may not describe you. In each box, rank the adjective that most nearly describes you as a "7", the next closest adjective as "5", the next closest adjective as "3", and the word that least closely describes you as "1". Each box should have four adjectives ranked 7,5,3 and 1 (no ties).

1. _____ a. stubborn _____ b. persuasive _____ c. humble _____ d. gentle
2. _____ a. competitive _____ b. playful _____ c. obedient _____ d. obliging
3. _____ a. adventurous _____ b. life-of-the-party _____ c. precise _____ d. moderate

4. _____ a. determined _____ b. convincing _____ c. cautious _____ d. good-natured
5. _____ a. assertive _____ b. optimistic _____ c. accurate _____ d. lenient

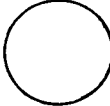
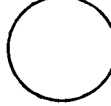
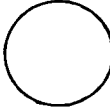
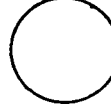
	a	b	c	d
1.				
2.				
3.				
4.				
5.				
Total				

Step two

Transfer your responses to this answer sheet and then total columns a, b, c, & d.

Step Three

Transfer the totals for each column to the circles in each corresponding quadrant marked a, b, c, and d.

 a. Dominance	 b. Influencing
 c. Compliance	 d. Steadiness

*After "TRAINING" Jan, 1983

BEHAVIOR STYLES — Application

Compensating For Differences In People

We encourage creativity when we recognize that each of us sees the world or its problems in a very special way.

Style	Description	Strengths	Weaknesses	May Need
D	Forceful	Likes change	Plays hunches	Direct answers
	Makes quick decisions	Solves problems	Easily bored	Authority
	Bold	Leader	Runs over people	Power
	Causes action	Innovator	Distrusts others	Status
	Domineering	Versatile	Causes trouble	Tough jobs
I	Emotional	Contacting people	Beats around bush	Freedom
	Talkative	Verbalizing ideas	Lacks follow through	Friendly environment
	Friendly	Motivational	Time problems	Incentives
	Optimistic	Cooperative	Dislikes details	Acceptance
	Impulsive	Helpful	Needs popularity	People
S	Steady	Sticks to it	Slow to change	Security
	Dedicated	Listens	Possessive	Appreciation
	Specialized	Loyalty	Security conscious	Tradition
	Predictable	Calming effect	Won't delegate	Group identity
	Patient	Good work habits	Inflexible	Status Quo
C	Accurate	Careful	No sudden changes	Personal attention
	Critical	Correct	Too precise	Precise work
	Compliant	High standards	Doesn't delegate	Few changes
	Controlled	Diplomatic	Suspicious	Many explanations
	Detail person	Controls emotions	Procrastinates	Standard Operating Job Procedures

Exercise 3

VALUES CLARIFICATION

Purpose

To provide participants an opportunity to explore how differing values can cause conflicts.

Format

groups of 4 to 6.

Time Requirement

:30 – 1:00

Resources Needed

- One chart pack page for each group
- One set of chart pack pens for each group
- optional - a copy of the value conflict examples

Background

There is no intention in this exercise for the participants to develop techniques to resolve the conflicts that arise from differences in values. The objective is to raise awareness.

Values often differ from person to person, especially when people come from different cultures or upbringings. However, differing values do not necessarily mean one is right and one is wrong. But differing values often lead to conflict. By understanding these differences we can usually take action to prevent the conflicts. It is much easier to prevent values-based conflicts than resolve them.

Activity

Follow these steps:

1. Divide the participants into groups of 4 to 6 people.
2. Either provide a copy of the value conflicts below or share this information verbally.
3. Direct the groups to identify 4 or 5 values conflicts that they have observed between the village, utility or community and outside agencies, individual, or companies. What was the result of the conflict? Was it resolved? How?
4. Direct the groups to discuss how this conflict could have been prevented or resolved.
5. Debrief by asking what lessons have been learned. Point out that conflicts over facts can be resolved by research. Conflicts over values are very difficult if not impossible to resolve.

VALUES CLARIFICATION — CONFLICT EXAMPLES

Subsistence vs. “professional”

Worker Life style

Many jobs are not flexible enough to allow folks to take long periods of time off or take off time on short notice (the caribou are migrating through). We see this in utility management in operators needing to work regularly, office staff needing to be there. Living a subsistence life style requires you at times to “get when the getting is good.”

Long Term Planning

Planning in a subsistence culture is usually no longer than for a one year period, when the seasons start again. Western culture plans much farther out: retirement, life goals, useful life of facilities. We find that there is resistance to planning sometimes not because rural folks don’t want to do it, but because it is outside of what they normally do and they are uncomfortable with it.

Sharing Work

Some communities feel that it is the responsibility of the city/tribe/governing body to distribute jobs among as many residents as possible. This may mean that there are 20 people working part time throughout the year rather than four people working full time. This makes a lot more work to do payroll, causes State unemployment taxes to skyrocket, leads to inefficiency on the job and increased training costs. From a business point of view it just doesn’t make sense. From a village point of view, however, it is simply another way that the residents are sharing in the wealth of the community.

Exercise 4

VALUES & DECISION MAKING

Purpose

Emphasize that we cannot be in the business of labeling people's values as right or wrong, but that understanding another person's values can help in dealing with that person.

Format

For this exercise, the students need to be in pairs.

Time Requirement

:30

Resources Needed

List of values shown below. Use overhead or chart pack. Or provide each pair with a copy of the list.

Activity

Follow these steps:

1. Divide the participants into pairs.
2. The first step is for each individual to select and rank the three most valuable items that they feel a child could have.
3. Once each partner has ranked their top three, compare to their partners list. If they are the same, why do they think they are? If they are not, why not? Would it be possible for the partners to make one list of the three most important?
4. After 20 minutes, assemble in the large group and ask the following questions:
 - Is there one set of right or wrong values?
 - How can understanding others' values help in supervising people or making decision?

LIST OF VALUED ITEMS

1. Ability to speak more than one language
2. Musical talent
3. Outstanding athlete
4. A leader
5. Good hunter/provider
6. Good in school
7. Independent
8. Has deep understanding of people

Exercise 5

BEHAVIOR vs MOTIVES

Purpose

Help the participants improve their communication skills by separating behavior from motives.

Format

groups of 4 to 6

Time Requirement

:30

Resources Needed

- One copy of the two-page Behavior Description exercise for each group.

Background

One of the major problems we have in communicating is our tendency to *label* behavior rather than describing the behavior. Typically this label is based on our *assumptions* about the motive behind the behavior.

When we confront or describe a situation by labeling the motive we are jumping to conclusions, because we cannot usually judge a person's motives. This causes conflict because such judgments are taken very personally. In order to improve communication we should focus our attention on an objective assessment of the behavior, not a subjective view of the motive. This is a simple exercise that allows the participants to explore the difference between labels and behavior descriptions.

Activity

Follow these steps:

1. Place the participants into groups of 4 to 6.
2. Hand out the exercise.
3. Describe the situation and review the two examples. Point out that a behavior is something that you can see, measure, video tape, etc.
4. Provide the teams 15 to 20 minutes to complete the exercise. Each team must agree on their decision.
5. After completion - provide the teams with the answers by reading each item, asking for their selection and then either agreeing or providing the correct answer. In many instances you may have to provide the reason for the answer.
6. Debrief by asking what they have learned. Point out the difficulty we all have in identifying behavior even when the situation is in writing. Encourage them to use this process when confronting or describing a situation. In addition, this process is an excellent tool for describing problems that occur during construction.

BEHAVIOR VS MOTIVES — DESCRIPTION

Behavior description is reporting specific, observable actions of others, without label-making, accusations, inferences, name-calling or judging motives.

It is a skill to help the other person become aware of his/her behavior. In using this skill, you describe what you see or hear and let the other person respond to your report.

When a negative situation occurs that causes emotions to run high, it is important to observe what behavior is involved, being careful not to label the person. Labeling suggests that we know his/her attitude, which we really cannot know because it is hidden. Describe only the observable behavior.

When we place a label on a person there is a tendency to respond to the person as though the label were true. The result is that the treatment tends to box the person into a stereotyped pattern, encouraging the same behavior to be repeated. The self-fulfilling prophecy comes true.

The goal is to objectively observe and describe negative behavior, attaching no labels. This gives the other person a chance to see the results of his/her behavior. In this way, a more favorable atmosphere is set for improved changes of behavior.

Examples:

Behavior	Labels
Fran left the meeting 30 minutes early	Fran is irresponsible. Fran was annoyed.
You interrupted me three times in the last 10 minutes	You are rude! You don't care what I think.

An exercise to practice behavior description and labeling

Directions: Read the following statements. Mark a "B" for each statement that is a behavior description; and mark an "L" for each statement that is labeling.

1. ____ Joe interrupted Harry.
2. ____ Harry was sincere.
3. ____ Joe was discouraged.
4. ____ Harry misinterpreted Joe.
5. ____ Harry's voice got louder when he said, "Cut it out, Joe."
6. ____ Joe was trying to make Harry mad.
7. ____ You insulted me!

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8. ____ Joe was dismayed by Harry's statements.
9. ____ Joe said nothing when Harry said, "Cut it out."
10. ____ Harry knew that Joe was feeling discouraged.
11. ____ Joe talked about the weather and the baseball game.
12. ____ Jane deliberately changed the subject.
13. ____ Bill forgot the meeting.
14. ____ After Harry's outburst, everybody was afraid to say anything.
15. ____ You are inconsiderate.

BEHAVIOR vs MOTIVES — ANSWER KEY

1. B__ Joe interrupted Harry.
2. L__ Harry was sincere.
3. L__ Joe was discouraged.
4. L__ Harry misinterpreted Joe.
5. B__ Harry's voice got louder when he said, "Cut it out, Joe."
6. L__ Joe was trying to make Harry mad.
7. L__ You insulted me!
8. L__ Joe was dismayed by Harry's statements.
9. B__ Joe said nothing when Harry said, "Cut it out."
10. L__ Harry knew that Joe was feeling discouraged.
11. B__ Joe talked about the weather and the baseball game.
12. L__ Jane deliberately changed the subject.
13. L__ Bill forgot the meeting.* could be either
14. L__ After Harry's outburst, everybody was afraid to say anything.
15. L__ You are inconsiderate.

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Exercise 6

MOTIVATION

Purpose	Help the manager understand that each individual may want something from the job that they have not considered.
Format	Individual and small group.
Time Requirement	:30
Resources Needed	<ul style="list-style-type: none">• One chart pack page and colored pens for each group• One copy of the “Priorities of the Job” scoring sheet
Background	<p>This exercise is designed to provide participants an insight into what people want from a job. This exercise is the result of a study done a number of years ago with 5,000 employees in 24 industrial plants. Some of the plants were union and some were not. The following table is a summary of how employees and supervisors rated ten items related to the job.</p> <p>Notice that the supervisors rated good wages, job security and promotion and growth within the company at the top of the list. In addition, all three of these items are out of the control of the supervisor and have a significant financial impact on the organization. The workers rated full appreciation of work done, a feeling of being in on things and sympathetic help on personal problems as their top three. All three of these are under the direct control of the immediate supervisor and cost the organization little or nothing.</p> <p>Remember, if you are attempting to fulfill needs that a person does not have they will become frustrated and their productivity may drop off.</p>

Supervisor	Worker
2	4 Job security
1	5 Good wages
5	6 Work that keeps you interested
3	7 Promotion and growth within the company
6	8 Personality of the workers
4	9 Good working conditions
7	10 Tactful discipline
8	1 Full appreciation of work done
10	2 A feeling of being in on things
9	3 Sympathetic help on personal problems

The important issue in this exercise is the manager understanding that what an employee wants from a job can only be defined by the employee.

- Activity
1. Place the participants in groups of 4 to 6
 2. Brainstorm or use some other technique to identify what you believe are the three things that your employees most want from the job. Place all responses on the chart pack page. Highlight the three that the group believes are the most important.
 3. Ask the question - for each of these three - who has control - the organization or the immediate supervisor? What is the cost of providing this?
 4. Handout the Priorities of the Job score sheet. Direct the participants to rank these ten items for themselves. What do they want most from a job. Use the ranking tool at the bottom of the page. They are allowed to add two items not on the list.
 5. Once completed have each member compare what they want to what the employees want. Are

there any differences? Why? This should be a group discussion.

6. When the discussion has dropped off, share the ranking information from above.

7. Ask, "For the top three items on your list, who has control? The organization or the immediate supervisor?" "What will it cost to provide this?"

6. Your closing point should be - We cannot tell what others want from the job without asking.

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MOTIVATION – fill-in sheet

In order to determine what is important to you, prioritize the list below and indicate who has control over this issue. The organization (O) or your immediate supervisor (S).

Item	Rank	Control
1. Job security
2. Good wages
3. Work that keeps you interested
4. Promotion and growth within the organization
5. Personality of the workers
6. Good working conditions
7. Tactful discipline
8. Full appreciation of work done
9. A feeling of being in on things
10. Sympathetic help on personal problems
_____
_____

Use the grid below to prioritize the 10 items above. To use this grid, compare two items at a time. Start by comparing item 1 to 2. Circle your choice as if the only choice you have is between these two items. Next compare 1 to 3, then 1 to 4 and so on. When you have finished column A go on to column B and repeat the process. Then to C, D, etc. When you have finished, count the number of times each number was circled and place that number in the ranking column above.

Prioritizing Grid

A	B	C	D	E	F	G	H	I
1 2	-	-	-	-	-	-	-	-
1 3	2 3	-	-	-	-	-	-	-
1 4	2 4	3 4	-	-	-	-	-	-
1 5	2 5	3 5	4 5	-	-	-	-	-
1 6	2 6	3 6	4 6	5 6	-	-	-	-
1 7	2 7	3 7	4 7	5 7	6 7	-	-	-
1 8	2 8	3 8	4 8	5 8	6 8	7 8	-	-
1 9	2 9	3 9	4 9	5 9	6 9	7 9	8 9	-
1 10	2 10	3 10	4 10	5 10	6 10	7 10	8 10	9 10

Exercise 7 PERSONNEL POLICY & SAFETY PROGRAM

Purpose	Help the manager evaluate their current personnel policy and safety programs.
Format	Individual and small group.
Time Requirement	:30
Resources Needed	<ul style="list-style-type: none">• Individuals should have a copy of their personnel policy and safety program if at all possible.• One copy of the “Personnel policy and safety program” evaluation• One copy of the “Safety Program” evaluation
Background	<p>This exercise is designed to provide participants an insight into the completeness of their existing personnel policy and safety program.</p> <p>These two documents are keys to preventing and resolving personnel problems.</p>
Activity	<p>Follow these steps:</p> <ol style="list-style-type: none">1. Hand out the evaluation pages.2. Direct each individual to complete the evaluation.3. When they are completed, place the participants in groups of 4 to 6.4. Ask them to compare their results. Direct them to look for the area that the group generally has the same positive or negative results.5. Ask the groups for their evaluation of the general condition of the groups personnel policies and safety programs.6. Debrief by asking - What have we learned?

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PERSONNEL POLICY AND PROCEDURES MANUAL — EVALUATION

The following is a list of components that are recommended in a personnel policy and procedures manual. Identify those that you believe are in your utility's existing personnel policy and procedures manual.

Item	yes	no	unsure
Hiring & Conditions of Employment			
The process used to apply for employment	_____	_____	_____
The utilities policy on the preference to hire local workers	_____	_____	_____
The policy on nepotism	_____	_____	_____
Conditions of employment	_____	_____	_____
Who has the authority to hire	_____	_____	_____
Supervision of employees - who supervises whom	_____	_____	_____
How employee groups are classified and special requirements for each classification	_____	_____	_____
Probationary period between hiring and becoming a permanent employee	_____	_____	_____
Job descriptions	_____	_____	_____
Layoff policy and conditions	_____	_____	_____
How to resign from the organization	_____	_____	_____
Compensation			
Wage categories and amounts	_____	_____	_____
Criteria for promotion and its relationship to pay increases	_____	_____	_____
How overtime is authorized and paid	_____	_____	_____
Which payroll deductions are mandatory and which are optional deductions	_____	_____	_____
Identification of pay periods and the length of time between the closing of a pay period and the issuance of a paycheck	_____	_____	_____
Policy on salary advances	_____	_____	_____
Evaluation, Discipline and Grievance			
How often employee performance evaluations are performed, by whom, their purpose and the criteria on which they were developed	_____	_____	_____
The level of absenteeism and tardiness allowed by the utility and the results of violation of this policy	_____	_____	_____
A description of the progressive discipline policy: it's steps and how they are applied	_____	_____	_____
A clear description of the grounds for dismissal	_____	_____	_____
How an employee can file a formal grievance against a supervisor, manager, or policy-making body	_____	_____	_____

Item	Yes	No	Unsure
Benefits			
A list of all holidays recognized by the utility and whether they are paid holidays or not.	_____	_____	_____
A description of the types of leave that can be taken by an employee with or without pay.	_____	_____	_____
A description of how personal or other leave is accumulated, how it can be used, how much can be accumulated and the required notice for using the leave.	_____	_____	_____
Travel & Training			
Allowable amount of travel expense established by the budget for each employee and the categories of activities that these expenses are charged against.	_____	_____	_____
How hotel, ground transportation and airfare are calculated.	_____	_____	_____
Requirement for reporting cost and information to the proper individuals upon return from travel/ training	_____	_____	_____
How to place a request for training	_____	_____	_____
Policy on repayment by the employee of training cost if the employee leaves the utility within a certain time after the training	_____	_____	_____
How meal allowance is calculated	_____	_____	_____
The amount of money set aside for training and the requirements for using this money	_____	_____	_____
The results of obtaining travel funds and not using the funds for the stated purpose	_____	_____	_____
Rules and Regulations			
The utility harassment policy and the results of violation of the policy	_____	_____	_____
The employee's responsibility to follow the safety and accident prevention program and how to report accidents and incidents	_____	_____	_____
The severance process	_____	_____	_____
The drug and alcohol use and abuse policy	_____	_____	_____
The use of utility vehicles and equipment for personal activities and the use of personal vehicles and equipment by the utility	_____	_____	_____

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SAFETY PROGRAM — EVALUATION

Below is a list of components recommended for a utility safety program. Evaluate your program against this list by indicating which items you have, don't have or are not sure of.

Item	Yes	No	Not sure
General Components			
• A written safety policy statement that is approved by the policy making body			
• Written documents addressing the major safety areas of the utility			
• An employee safety handbook			
• Safety equipment and personnel protective equipment for the employees			
• A safety training program			
• A record keeping system for the various aspects of the safety program			
• All safety components are based on a hazard assessment			
Special Safety Program			
• Accident and illness prevention			
• Confined space entry			
• Lockout/tagout			
• Respiratory protection			
• Exposure control			
• Competent person			
• Hazardous material communication			
• Traffic control			

Exercise 8

MANAGER'S SELF EVALUATION

Purpose

Help the manager evaluate their management and leadership skills.

Format

Individual

Time Requirement

:20+

Resources Needed

One copy of the "Managers Self Evaluation"

Background

This exercise is designed to provide participants an insight into how they rate themselves on key management and leadership functions and characteristics.

Activity

Follow these steps

1. Hand out the Managers Self Evaluation form
2. Direct the participants to complete the evaluation
3. At the conclusion - ask them to share any insights they have

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MANAGER'S SELF EVALUATION – fill-in form

Below is a list of characteristics and functions of good managers and leaders. Take a few minutes and score this evaluation.

Item	I do this	I don't do this	Needs Improvement
I have a clear vision of where we are going			
I am able to communicate the vision to the policy making body, staff and customers			
I am successful in letting the staff know what is expected of them			
I pay attention to the details that point the organization in the proper direction			
I provide resources as necessary for staff to achieve the goals and objectives			
I understand the goals and objectives of the organization			
I make decisions in a timely manner and seldom procrastinate on tough decisions			
I develop and use formal and informal lines of communication			
I recognize that people are individuals; they each want different things from the manager and their job			
I recognize that different people respond to different motivations			
I allow and require participation by staff in decisions that affect the staff			
I empower people to make decisions take responsibility and be accountable for their behavior			
I reward action that contribute to the goals and objectives of the organization			
I am an effective listener			
I am available to meet with staff on a regular basis to listen to their concerns			
I am available to customers at specific times to listen to their concerns			
I delegate responsibility and authority that allows the staff to get the job done			
I recognize and reward achievements that are consistent with the goals and objectives of the organization			
I apply discipline fairly when behavior is not consistent with the policies, goals and objectives of the organization			
I am sensitive to the needs of others			
I am honest in all dealings of the organization and in my personal life			

For each item that is marked "I don't do this" what could you do to improve in this area?

Exercise 9

SMALL WIN - CASE STUDY

Purpose

Help the manager understand the key roll the manager can play as leader.

Time

:30

Type of Activity

Individual with group discussion

Resources Needed

- One copy of the “Small Win” case study per student

Background

This exercise is designed to provide participants an insight into the simple steps a manager can take once a common vision is developed and the staff is given authority and responsibility for carrying out a job.

This exercise was adopted from an original story told by Tom Peters in the book *In Search of Excellence*.

Activity

Follow these steps:

1. Hand out the Small Win case study.
2. Direct the participants to read thoroughly and identify what this manger did. Ask them to not focus on the results, but focus on what the manager in the story did. Have the students ask as they read: “What was the vision? What did he do first? Second?”
3. When they are finished - open the discussion by asking the above questions.
What did he do first?
Second?
What was the vision?

Answers

The vision was “I wanted to know what it took to make a good district.”

What he did first was to establish a vision.

Then he sent people out to look at other facilities and come back and compare them to their own.

Decide what to do - Empowered them to fix what they could using their own resources. This involved people in the action.

Rewarded the improvement.

Case History “The Small-Win”

This case history was adapted from a story told by Tom Peters in “A Passion for Excellence”

I had no authority ... but here was an opportunity. Here was a district shop that had one of the poorest production records, highest accident records and greatest absenteeism rates of any district in the state. I wanted to know what it took to make a good district. I said to John (the district manager), “Look, we are going to bring into this district a group of people, a team, and you’ll be the quarterback. You and they will go and visit all of the other districts in the state and write up what you find. You’ll check our operation top to bottom and write it up. Every afternoon just before quitting time you’ll hold classes with a flip chart and will have a consultation with everyone... In addition, I’m gonna bring in some of the other regional managers and managers from some of the well run county and city shops in the area along with our safety officers and human resource development people. I want to know the sum total of our know-how by taking a sampling of a group of people dedicated to finding out what they can do thinking together.” For weeks they studied the district. They had a tough time agreeing with each other, but they did. The managers background in facilitating was a key in helping them move rapidly. The spirit was sky-high; excitement was beyond description. Why? For the first time they were given a chance to express themselves as individuals and as a group, each one giving the best that he knew.

Not a nickel was spent. Every change was made from what we had in the district. The shop building was cleaned up, rest rooms and all. The yard was cleaned as well as all of the equipment. The interior, lunch area and shop were painted. Minor repairs to vehicles were taken care of by the operators. They developed production guidelines as well as setting internal measurement and rewards for production and safety. Each person became responsible for a specific set of tasks. They worked with each other to set up time-saving features in scheduling work, performing the most common tasks, and arrival and departure procedures at the shop. All this time they focused constantly on the causes and prevention of every type of accident that they were familiar with. It was a new shop, a pleasure to the eye. And as an added bonus the personal appearance of the crew members began to improve.

What put the idea across? They knew they had to visit all of the competition and then look at their shop with a cold eye. They applied what they learned. Up till then, they had to look at the eyeballs of the boss and guess what it was he wanted. All I did was ask them to use their senses and their heads, and I got a damn good district. Over the next two years, the maintenance practices in the district improved and resulted in written comments by local citizens.

The productivity, when compared to the other districts in the region, slowly went to the top and then, finally, they had the best productivity record in the state as well as the best safety record. The absenteeism rate dropped to nearly zero. Broken and damaged equipment rates dropped resulting in a sizeable financial savings. After all of the hustle and bustle, the whole department became aware of the changes. The commissioner and his entourage came running to see what was happening.

Now everybody jumped on the bandwagon. Now everybody wanted a district. Every executive in the commissioners office wanted to be an in-house consultant, even the commissioner.

Show the people a way. That's what I did. I even had a place to send everyone - Silver Falls. "Go to Silver Falls," I told them. "Go there, look at the shop, look at the highways, the parks and the rest areas and learn. It was put together by people like you, using spit and polish and only their own normal talents." A little while later, in the commissioners office, I changed the pattern. To a regional manager, I said "All right, Joe, you don't have to go to Silver Falls. Do me a Silver Falls right here in your region. You have seen what can be done. So go do a Silver Falls in Medford. But I don't want you to copy it. We'll keep Silver Falls as a sort of school." I told him to give me his version of a good district in the Medford region.

Well, several weeks later he invited me to one of the districts in his region. I found the public use areas to be well maintained and some were even beautiful. The shop was unbelievable. Who would have guessed that this horrible looking 30 year old wooden building and grounds would be the attraction of the neighborhood? Now their maintenance practices would be looked on as the standard by county and city maintenance crews in the district. Like Silver Falls, their production rate started going up, accidents were going down and the costs were holding steady. This district became the best in the region and then finally out-did Silver Falls. The overall result was an improvement in almost every area region wide. The result was a challenge to the other regions to go out and "Do a Silver Falls."

As the commissioners office began to brag more and more, I expanded the variations. I used the idea of the Silver Falls district as a visual aid. This meant devising a system of selecting one unit for improvement, getting the people to bring it into shape, then bringing others to see what they did so they could learn from it. This became a substitute for writing memos or giving instructions on the phone. Instead, I said, "Come look and see. This is the new department of transportation — nothing else is — this is it!" I instructed every region that it must have its own model district. Every regional manager would have to reflect all his knowledge in one district and from that "Silver Falls" improve all the districts in his region. It would be his model, his manager's model and the model for everyone who would look at it. The idea caught on like wildfire. They did it evenings, Sundays, holidays and days when the weather didn't permit other work. The Sundays became big shin-digs with refreshments and food provided by everyone. They had the year of their life getting the department into shape.

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Exercise 10

EEO & AFFIRMATIVE ACTION

Purpose

This exercise is designed to help participants assess their current knowledge of the laws governing EEO and fair employment practices and to stimulate their interest in learning more.

Format

This activity was designed for small groups (4 to 6) utilizing individual responses that are shared in small groups and then with the entire class.

Time

:30

Resources Needed

- EEO inventory sheet
- Pencils for each participant

Activity

1. Divide the participants into groups of 4 to 6.
2. Hand out the quiz sheet.
3. Direct the participants read each statement and determine if they believe it to be true or false. If they cannot agree on an answer then vote and place the number who voted for each answer above the answer.
4. Upon completion - the instructor goes through the questions one at a time providing the correct answer. If there is a disagreement then the instructor can refer to the support material in the answer sheet.
5. Conclude by asking:
 - How does this apply to current situations in their utilities?
 - What have we learned about EEO laws?

EEO/AA/Fair Employment Quiz

Session Builders is credited with the original design of this exercise

Circle each statement as either True or False

- T F 1. An employer must give women applying for a physically demanding job the opportunity to show that they can do the work.
- T F 2. Only intentional discrimination by an employer may be considered unlawful.
- T F 3. An application form that requires applicants to name friends or relatives in the employer's work force may be discriminatory.
- T F 4. If a married couple request to work in the same department or small business, an employer must allow them to do so.
- T F 5. Fair employment rules apply equally to all employers, labor unions, and employment agencies.
- T F 6. An employer can generally use a job applicant's personal credit rating as a basis for non-employment.
- T F 7. An applicant's lack of English language skills cannot be used as a basis for non-employment unless those skills are required to successfully do the job.
- T F 8. An employer may make medical benefits to a woman on maternity leave conditional on her return to work.
- T F 9. An employer may not take retaliatory actions against an employee who has filed a discrimination charge.
- T F 10. An employer cannot be expected to control prejudicial comments about race, ethnicity or sex directed at minority employees on the job.

EEO/AA/Fair Employment Quiz — Answers

1.(T) The disparate treatment of male and female workers is often based on stereotyped characterizations of the sexes. For example, the assumption that females are less capable of performing strenuous physical work than males has been viewed as wrongfully foreclosing many job opportunities to women. Under the law, all candidates for a position requiring physical strength must be given opportunity to demonstrate their capability to perform the work. In *Griggs v Duke Power Co.*, it was decided that an employer must be ready to show that criteria used to make an employment decision which has a disparate impact on one sex or the other, such as minimum physical or educational requirements, are, in fact job-related.

2. (F) Discrimination need not be intentional, however, to be unlawful. Any employment practice which has the effect of screening out members of a protected group at a disproportionately higher rate than persons not belonging to the group is viewed as discriminatory. The unlawful employment practices in question can be a current employment practice or a practice which, although unbiased on its face, perpetuates past discrimination. Proof of intention, however, might be required where disparate treatment is alleged.

3.(T) The questions which may be asked of a job seeker on an application form generally are subject to the same restrictions as those pertaining to pre-employment inquiries. For example, a requirement that applicants state the names of friends or relatives in the employer's work force may also have an unlawful discriminatory impact on minority job seekers if hiring preference is accorded to friends or relatives of employees and minority group representation in the employer's work force is disproportionately low.

4.(F) Sound business reasons may exist for a rule against the employment of husband and wife in the same department or in a small business operation. To avoid a charge of sex discrimination, any rule against husband-wife employment should provide the two individuals with a choice as to which one will stay. In the event they cannot choose between themselves, the selection should be made on some non-sexual basis such as seniority. Rejecting women for employment because they are married or terminating them because of marriage would, of course, amount to unlawful sex discrimination when men are not treated similarly.

5. (F) The rules against discriminatory employment practices are based on a number and variety of legislative enactment's and executive orders, as well as on the U.S. Constitution. The laws and constitutional commands do not apply equally to each employer (private or public), labor union, or employment agency. Nor do they treat equally all of the types of prohibited discrimination. These rules derive from the federal authority to regulate interstate commerce, from constitutional amendments, from early civil rights laws, and from the authority of the federal government to place restrictions on businesses selling its goods and services. The source of the money used to finance a project or operation may also be the basis for applying an additional set of rules. Whether the employer is operating in private industry or is performing a public function can bring into operation a different set of rules.

6. (T) If the percentage of minority group members with poor credit ratings is significantly higher than the percentage of non-minorities with poor ratings, an employment policy of screening job applicants on the basis of their credit references or records has a foreseeable disproportionate adverse impact upon minorities as a class. Therefore, such a policy will be considered unlawful racial discrimination, unless an employer can demonstrate that the policy is warranted by an underlying business necessity. The practice of screening applicants on the basis of the number of times they have suffered wage garnishments in the past also falls within the proscription. If solicited in good faith, given appropriate weight, and not used to accomplish a discriminatory result, a previous employer's assessment of a job applicant can provide a lawful basis for a prospective employer's decision to hire or reject that applicant. However, an inflexible policy of rejecting job applicants (or discharging current employees) solely on the basis of adverse reports from previous employers, sometimes tainted by that employer's own prejudices, can have a disproportionate impact on workers whose status is protected under the federal employment practices laws.

7. (T) Unlawful discrimination occurs when an employment decision is based on the national origin of the person adversely affected by that decision. There are ways in which the law may be violated other than by a denial of job rights. The incidence of unlawful national origin bias is not confined to discriminatory hiring, assignment, seniority and promotion policies. Adverse employment decisions based on an applicant's or employee's lack of English language skills have been considered to violate the 1964 Civil Rights Act where the language requirement bears no demonstrable relationship to the successful performance of the job to which it is applied. On the other hand, requiring a Spanish-speaking applicant for carpentry work to take a civil service examination in English has been viewed as proper when the use of English was found to be related to job performance.

8.(T) The 1978 amendments to Title VII of the 1964 Civil Rights Act added the requirement that women affected by pregnancy, childbirth or related medical conditions be given a leave of absence on the same basis as other employees temporarily disabled. Employers may take actions to prevent possible abuse of these leave privileges. For example, employees could be required to submit medical evidence of continued disability; or to discourage women from terminating after availing themselves of disability benefits, an employer could condition the benefits on a return to work when their maternity leave expires. Any restrictions on leave privileges would have to be applied even handed to all other employees, however.

9. (T) It is unlawful for an employer to take retaliatory action against any individual who opposes employment practices that are prohibited by law. Retaliation against persons who have filed charges, testified, assisted or participated in any way in any proceeding, investigation or hearing under the provisions of the age discrimination law, or under Title VII of the Civil Rights Act, is expressly prohibited. Unlawful reprisal actions often entail the assignment or transfer of workers who have filed discrimination charges against their employers to "undesirable" positions in terms of pay, working hours, job security, and the like. The refusal to hire a job applicant solely because he/she has previously filed charges of discrimination against an employer would constitute an act of unlawful retaliation.

Personnel Management

10. (F) While an employer cannot be held accountable for the prejudices of its workers or clientele, it is under a duty to take reasonable measures to control or eliminate the overt expression of those prejudices in the employment setting. This duty has been viewed as extending not only to workers who are the objects of unlawful harassment, but also to those who are offended by the harassment of others.

Sexual harassment of employees by either supervisors or other employees may be considered unlawful. Upon becoming aware of any such conduct, an employer should take steps immediately to correct the situation.

Racial and ethnic epithets, slurs or jokes directed at, or made in the presence of, minority group employees are not to be tolerated as a condition of employment. The use of courtesy titles, such as Mr., Mrs., Miss, or Ms., when addressing Caucasian employees, while addressing Negro workers by their first names, has been considered to be racially discriminatory.

An employer may not allow its clientele to harass or otherwise cause undue mental distress to its employees in a discriminatory manner. Segregation of customers on the basis of their race or national origin and other forms of discrimination against clientele have been considered unlawful on the theory that those practices have an adverse psychological impact on minority employees and derogate their right to work in a nondiscriminatory environment. Also, a policy prohibiting employees from speaking in their native tongue during working hours can constitute a form of unlawful harassment on the basis of national origin.

Answers taken from the 1981 Guidebook to Fair Employment Practices Commerce Clearing House, Inc. , Chicago. Illinois 1980.

Exercise 11

THE COMMUNICATION GAP

Objective:

To reinforce the point that effective communication requires feedback and clarification.

Time needed:

0:30

Materials needed:

Copies of these discussion questions, paper and pen for each group

Format:

two teams

Instructions:

The two teams are competing on a TV game show and the instructor is the moderator. Each team sends 2 people to the front at a time. Each pair of teammates sits facing each other about 5 feet apart, and so they cannot see what the other is writing.

The moderator hands a card or paper with one statement on it to one team member, who reads it *once* to his partner (and so whole class can hear.) [Alternatively have the moderator or another person read the original statement for all to hear.] The moderator then asks the follow-up question *once* and both teammates, without any collaboration, must write their answer on a pad or small whiteboard in large letters. They have 15 seconds to do so.

The moderator then asks them to turn their answers around for all to see. He compares the answers and awards the team 100 point for a fairly close match, 200 points for good match and no points if the answers are too different. 300 points are deducted if one teammate does not have an answer down in the 15 seconds or if anyone tries to cheat by signaling his teammate etc.

Alternate teams and teammates so each of the four people up front have read a statement. Then call up four more contestants. You can make up some of your own statements if desired.

Personnel Management

Exercise 11 THE COMMUNICATION GAP – statements and questions

“I expect the compressor to be fixed soon.”

How long does he mean?

“That’s an good idea you have about modifying the auto-switch.”

- A. go ahead and make the modification.
- B. wait till he thinks about it some more.

“Where did you put that thing you open that funny door with?”

- A. garage door opener
- B. key to truck gas cap door
- C. special lever for opening side panel on boiler

“We don’t usually take leave in May.”

- A. People just haven’t wanted to take leave in May
- B. You should try to avoid taking leave in May
- C. You can’t take leave in May

“Be careful on that snow machine”

Specifically what does he want you to do or not do?

“I’ll need a couple of days off to see my sick brother in Dillingham.”

- A. He’ll need 2 days off and be back at work on the third.
- B. He’ll need 2 or more days off depending on how things go.
- C. He’ll visit his brother, some friends, do some shopping, fishing and might call after 3 or 4 days to see if he’s needed...

“The previous clerk had coffee ready by 9:00 every morning.”

Should you make coffee even if you don’t drink it?

“Next time look in the yellow pages for a plumber!”

Is he serious or is it a sarcastic remark?

“Hey, give it a break, will ‘ya!”

- A. Take a 15 minute coffee break.
- B. Don’t do that annoying thing anymore.
- C. Do something different for a while, then try it again.

“If you could get that report to me in the next day or so, that would be great.”

- A. Go ahead and take that leave without pay to go up river for two days then do the report when you get back.
- B. Get the report done before taking off because I really need it no later than the day after tomorrow.

“If Walt talks to me like that again I don’t know what I’ll do.”

- A. Maybe I’ll come back with a good wise crack of my own.
- B. I may file a harassment grievance.
- C. I think I’ll knock his block off.

Exercise 12

BEST COMMUNICATION

Purpose

Help the manager identify the best communication technique for a situation. small groups.

Format**Time Requirement**

:30

Resources Needed

One copy of the “How to Communicate” scoring sheet for each group.

Background

This exercise is designed to provide participants an insight into the need to select the best communication technique for a given situation.

In many cases the communication method may include two steps. The first response may be by phone or FAX with a follow-up by mail.

Activity

Follow these steps:

1. Divide the class into groups of 4 to 6.
2. Hand out the “Best Communication” scoring sheet.
3. Give the following directions:

Select the best communication technique - from the list provided - for each of the activities listed. The group must agree on the selection and be able to defend their selection.

4. After the groups have completed the exercise ask for their input. Place the results on a chart pack page.
5. Select one item for each group to discuss- ask them why the selection was made and ask them to defend the selection.
6. Debrief by asking what lessons have been learned.

Personnel Management

BEST COMMUNICATION – fill-in sheet

Six communication methods have been identified that are used by utility managers. These methods are listed below. Using the numbers associated with each of these methods, select the best method to communicate in the situation described below.

Communication Methods

1. Face-to-face
2. Written - memo or letter - hand delivered or mailed
3. Phone
4. FAX
5. E-mail
6. Third party

- A. Discipline of an employee for coming to work late.
- B. Response to ADEC for failure to send a bacteriological sample last month.
- C. Notice to the customers of possible contamination of the water supply.
- D. A vendor just called and wants to know which bearing is needed for the pump.
- E. A memo just arrived from the regional health corporation asking you to confirm that you will be attending the meeting next week.
- F. You have an accounting question for DCED - it is not serious but you would like an answer soon.
- G. You have called DCED several times with a question. However, the person you want to talk to is out of town and will not return until next week. How will you leave the question for them so they can answer it on their return?
- H. VSW has asked that you send a signed copy of the last page of the contract to them in Anchorage ASAP.
- I. An employee repeatedly comes to work 1 to 2 hours late. You have confronted him/her several times about this. Now you want to discipline the employee in a formal manner. How do you communicate this to them?
- J. You are writing a grant proposal and are having trouble with one paragraph. DCED has said that they will assist you in writing the paragraph but need to see it in order to help. You need to complete this proposal today.
- K. A customer called this morning with a complaint about the water and sewer bill. You have reviewed the situation and need to get back to the customer.

Exercise 13

WHAT WOULD YOU DO

Objective

To prepare students to respond to personnel and intra-government problems.

Time needed

30 minutes

Materials needed

note taking materials for each group or individual.

Format

small groups; can also be done as individuals or as a full class.

Instructions

Each of the small groups should discuss and prepare to report on a couple of the situations, so that all situations are covered. After 10-15 minutes, have each group report on what they came up with and allow for class discussion. Alternatively, assign one problem to each student to individually prepare a solution, or simply go through them as a full class.

1. An employee shows up to work an hour later than expected by his supervisor.
2. Even though an employee has not been working the assigned hours over the previous two weeks, the employee turns in a time sheet *claiming* to have worked all the available hours.
3. A council member tells an employee to do certain work without talking with the employee's supervisor.
4. A Department's supervisor hires employees without talking to the City Administrator and instead tells the Council.
5. A Department supervisor feels that his/her department should be getting more support because they bring money into the city. Yet the department head is not *sure* if they make any money and does not even know how much money is available for purchasing supplies.
6. An experienced water plant operator reports to his supervisor that he is looking for another job since he does not feel appreciated and has had his salary cut 10% this year because of a shortage of city funds

Personnel Management

Personnel Management — Worksheet

1. A manager has five resources to manage. They are:

2. Most people will do the right thing if they _____.
3. Once a manager has communicated a person's responsibility and authority, the next step is to communicate the manager's _____ and how the person will be held _____ for their behavior.
4. Personality style is determined by observing a person's _____.
5. How a person does what they do is a reflection of their _____.
6. By developing an understanding of our personality style, we are better able to understand the _____ of others, and thus reduce _____.
7. Values are a reflection of _____ we do what we do.
8. One of the keys to effectively working with a person who has a different values or personality style is to _ _____ the situation to more closely fit their styles and values.
9. Good leaders:
- Have a clear _____ of where they are going.
- Are able to _____ this to their followers.

10. List at least two examples of the functions of a manager?

11. Three questions that most employees want answered by their employer are:

12. List at least two examples of what people tend to want from a job other than money:

13. Delegation is the thoughtful _____ of work to others.

14. When delegating tasks, it is important to also give the _____ and
_____ necessary to get the job done

15. The personnel _____ and procedures manual and the _____ safety
handbook help provide for _____ treatment for all employees.

16. What document would you use to find out how often to do employee evaluations and the criteria for the
evaluation? _____

17. List at least three section headings that should be in an employee policy and procedures manual?

Personnel Management

18. When developing a safety program, one of the first steps is to perform a _____ assessment.
19. The function of feedback in the communication process is to provide _____ and _____ of information.
20. Up to _____ % of communication is non-verbal.
21. A breakdown in communication often occurs because we _____ the information we take in.

Personnel Management – Worksheet & ANSWERS

1. A manager has five resources to manage. They are:

information

people

time

facilities

Money

2. Most people will do the right thing if they know what is expected.
3. Once a manager has communicated a person's responsibility and authority, the next step is to communicate the manager's expectations and how the person will be held accountable for their behavior.
4. Personality style is determined by observing a person's behavior.
5. How a person does what they do is a reflection of their personality style.
6. By developing an understanding of our personality style, we are better able to understand the styles of others, and thus reduce conflict.
7. Values are a reflection of why we do what we do.
8. One of the keys to effectively working with a person who has a different values or personality style is to adapt the situation to more closely fit their styles and values.
9. Good leaders:
- Have a clear vision of where they are going.
- Are able to communicate this to their followers.

Personnel Management

10. List at least two examples of the functions of a manager?

Communicates the future direction of the organization, Lets the staff know what is expected of them. Pays attention to the details that point the organization in the proper direction, Provides resources as necessary for staff to achieve the goals of the organization

11. Three questions that most employees want answered by their employer are:

How am I doing _____?

Where am I going _____?

What's in it for me _____?

12. List at least two examples of what people tend to want from a job other than money:

A feeling of being in on things, Sympathetic help on personal problems, Job security, Interesting work (usually involves responsibility)

13. Delegation is the thoughtful _____ assigning _____ of work to others.

14. When delegating tasks, it is important to also give the _____ resources _____ and _____ authority _____ necessary to get the job done

15. The personnel _____ policies _____ and procedures manual and the _____ employee _____ safety handbook help provide for _____ fair and equal _____ treatment for all employees.

16. What document would you use to find out how often to do employee evaluations and the criteria for the evaluation? _____ Employee policy and procedures manual _____

17. List at least three section headings that should be in an employee policy and procedures manual?

Hiring and conditions of employment; Compensation; Evaluation, discipline, and grievances; Employee benefits; Travel and training; Rules and regulations

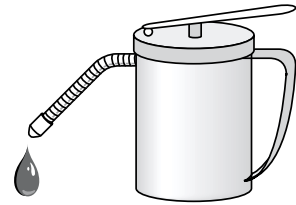
18. When developing a safety program, one of the first steps is to perform a hazard assessment.
19. The function of feedback in the communication process is to provide clarification and correction of information.
20. Up to 90 % of communication is non-verbal.
21. A breakdown in communication often occurs because we filter the information we take in.

Operations Management I & II

Key concepts to learn

Part I

- The advantages of a maintenance management system
- What goes into a maintenance management system
- What stands in the way of a maintenance management plan
- How to determine personnel requirements
- Importance of work order systems
- Why and how to run a consumable inventory system
- Importance of data collection and reporting
- What reports need to be produced



Part II

- Importance of an asset inventory control system
- Asset inventory control system development
- Components of a utility contingency response plan
- How to take control of your time
- Common uses for computers in water and wastewater utilities
- Computer hardware and software setups for small utilities

Key terms to know

Part I

- Assets
- Consumables
- Maintenance Management
- Routine Task
- Time Management
- Certification
- Critical Spare Parts
- Non-routine Task
- Service Level

Part II

- Capital
- Hardware
- Data base
- Asset
- Software
- Spreadsheet

Presentation Sequence – Part I

Introduction :10

overheads 1-2 These basics should be nothing new to most managers, but make sure

everyone is using the same terms in the same ways before moving on. This is also the place, as usual, to hark the benefits of good management. Operations is one of the more obvious facets of the job, so at least you are not starting from scratch.

Maintenance Management System :40

- There is no way this course could actually lead a manager into building a MM system from the ground up, so the goal is to raise awareness of the benefits of such a system and give an understanding of its parts and pieces.
- overheads 1-6 These overheads cover the basics of what a MM system does (and therefore why it is good to have one), what things make it hard to get one started, what the basic components are and the basic steps in setting one up.
- overheads 7-10 Now it is time to cover several of the components of the MM system individually, to show what goes into setting one up. Note that the first four of the six components of the MM system are in *Operations Management I* and the latter two in *Operations Management II*.
- overheads 11-15 Data Collection and Reporting is an important management subject...that's easy to put off. A good explanation of the concepts followed by some clear examples of the forms and reports should help reduce record keeping anxiety

Exercises 1:40

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

The students should have already read ahead through the *Operations management II* chapter by this time if you are following the sample schedule in the front of this book.

Exercise Notes

see part 2

Operations Management I & II

Presentation Sequence – Part II

Introduction :05

overhead 1

Continuing from the previous lesson, Asset inventory system and contingency plan finish off the components of the Maintenance Management System. Time management and computer use follow and are related not only to each other, but to just about all the topics too. That's something to note, how none of these topics exist as islands.

Asset inventory system :20

overheads 2-5

Its helpful to start this section with a look back at one of the exercises from the first chapter of the course having to do with evaluating each student's utility systems or especially the one estimating the monetary value its assets. One of these could be done at this point if not covered before. This helps reinforce the notion that the utility's assets are a valuable investment worth protecting. From there its mostly a matter of explaining how such a system works.

One point that trips up many students is the difference between the renewal and replacement plan (<10 year life) and the capital replacement plan (>10 year life) and the difference in reserve set-asides.

Contingency Plan :15

overheads 6-7

Once the benefits of a contingency plan are seen to be worth the time to make one, the particulars are not too difficult. The tricky part is making a good assessment of which risks merit the attention and preparations. Encourage the students to find out about other emergency planning that might exist in their village so as to coordinate efforts and get ideas.

Time Management :15

overheads 8-11

The further into management and the more responsibility a manager has the more important time management becomes. Some of the managers in the class have undoubtedly already experienced this. Other should take this as a warning. What is presented here is just one set of ideas and methods. The important thing to teach is the importance of making the most efficient use of time. It really is another asset that belongs to the owners (customers) and needs to be protected for their benefit.

Computers :20

overheads 12-16

You will need to sound out the class to see where everyone's in their state of computerization to make the best use of this time slot. Spend more or less time on each point depending on the level or levels of sophistication.

Exercises 1:40

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

The students should read the *Financial Management I & II* chapters for the next day's sessions and note any questions that come up.

Exercise Notes

The exercises for both parts of the operations management lesson are described here. They can be placed almost anywhere in the lesson after introducing the concepts involved.

Exercise 1

:30-40 Frequency of Tasks

Some managers without operations experience may not know many of the answers, but they can learn.

Exercise 2

:30-40 Operations & P M Management

This is the meat of the matter, and may be challenging to some students, especially if they are unfamiliar with operations. There's a good lesson right there. There are two situations provided. As instructor, you need to take the time to become familiar with all them and use one or both of them as appropriate for the class situation at any given time.

Exercise 3

:30-40 Blue Monday

Although this lesson is a bit involved, so is being a utility manager. It is a chance for some practice under a guiding eye. Using your judgement of the level(s) of the student's skill and experience, this can be done as individuals or as pairs.

Exercise 4

:45 Walk Through Washeteria

This is a pretty straightforward exercise. Keep the students directed toward positive solutions and away from quick fixes. Refer back to the Small Win case study for inspiration. Try also to refer to aspects of this course that address how to handle the problems.

Exercise 5

:30-40 Computers & Utilities

Computers have become a fixture, and can be a good tool for a utility. However, as with any tool, there is a cost associated with its use (not only monetary). Help the students analyze and realize both the pros and cons. There will likely be a large variation in computer experience among the students in your class, so try to accommodate the uninitiated by forming the groups with a mixture of ability levels.

Operations Management I & II

- Exercise 6** **:15** **Calendar Brainstorm**
- A quick exercise to get the thought process going on the use of a calendar to keep the many time demanding items straight. You will need to keep it moving if you want to keep in the 15 minute time frame.
- Exercise 7** **:30-40** **Objective Risk Assessment**
- Most people do not think about assessing risk for the purpose of deciding whether or not to protect against it. But they do it unconsciously—and haphazardly. This exercise introduces the theory with some examples. Stress right away that the examples and conclusions shown here cannot be generalized. Each situation has to be decided individually. The point is that these factors figure into such decisions.
- Exercise 8** **:40** **Out to Sea**
- This fun exercise aims to sink the idea that circumstances bring on failure. Through the analogy with ships and navigation, the students should not only review the functions of the various parts and pieces of the utility, but realize that good management and planning can help weather the most severe storms.
- This exercise touches on topics from the planning, operations, financial and organizational categories of this course and can be used at various points along the way.

Exercise 1

FREQUENCY OF TASKS

Purpose

To help managers understand what types of tasks an operator would have to do in a washeteria and to emphasize the need for a PM schedule.

Format

This activity was designed for small groups.

Time Requirement

30 minutes

Resources Needed

Task list

Answer sheet

Background

Many managers are not knowledgeable about the physical plant or what tasks are needed to maintain it. This exercise will ask managers to estimate the frequency of maintenance tasks at typical washeteria.

Sequence

Divide the participants into groups.

Allow 20 minutes for the groups to answer the questions.

Hand out the answer sheet and discuss the questions

Some of the tasks such as testing for chlorine are required by regulations. Other frequencies are dictated by good operational practices. Some tasks, such as back washing the filters, are highly dependent on the type of filters and the volume and quality of water filtered. This exercise provides an opportunity to point out that a manager needs to discuss the issue with the operator and come up with the appropriate tasks and their frequency for their particular system.

OLD ROCKY TASK LIST

On the task list below, check the box to show the frequency of the tasks in the Old Rocky System.

Task	Daily	Weekly	Monthly	Yearly	Other	Notes for class discussion
Test and record chlorine residual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Test and record fluoride residual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Visual check of boilers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Visual check of the building plumbing for leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mop the treatment plant floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Backwash filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check normal settings in plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Visual inspection of all control panels and pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check level of fuel tank and fill if needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check dryer air ducts and clean if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check chemical vats and mix solution if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean liquid end & injectors on chemical feed pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Visual check of lift station control panel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Complete operations report for utility manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Send bacteria sample into the lab for analysts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Send completed water quality report to ADEC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check fire extinguishers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check all alarm systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Perform smoke dot test and efficiency test on boilers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Test pressure relief valve on hot water generator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Order parts and supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean all smoke and heat detectors in building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Exercise valves in the plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Task	Daily	Weekly	Monthly	Yearly	Other	Notes for class discussion
Check the emergency lights in the building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vacuum the coils of the dryers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remove lint from dryer screens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check pH level of glycol in heating system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grease bearings on dryer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inspect lagoon for weeds and damage, repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lubricate external parts of filter Solo™ valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean coils on hot water regenerator, drain and flush tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Perform boiler maintenance on nozzle, electrode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inspect and clean chimneys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Replace fuel filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check the sand filter for mudballs, cracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Complete pre-winterization task list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean insects out of light fixtures and replace bulbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Call aDEC to check on operator certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vacuum coils of the unit heaters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean bathroom exhaust fans and air ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Complete log entry for description of events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Update inventory list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Alternate pressure pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Measure reading on heat tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record pressure, flow, and temp. in circulation loops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record all water use meter readings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record electric meter reading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Count and record tokens, in washers, dryers, showers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record water temperature from well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

OLD ROCKY TASK LIST

Answer Key	Task	Daily	Weekly	Monthly	Yearly	Other	Notes for class discussion
	Test and record chlorine residual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Required by regulations
	Test and record fluoride residual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Required by regulations
	Visual check of boilers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Critical during winter months
	Visual check of the building plumbing for leaks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Mop the treatment plant floor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Backwash filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	As needed based upon readings
	Check normal settings in plant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Visual inspection of all control panels and pumps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Check level of fuel tank and fill if needed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Depends on fuel consumption
	Check dryer air ducts and clean if necessary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Check chemical vats and mix solution if necessary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Clean liquid end & injectors on chemical feed pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Visual check of lift station control panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Complete operations report for utility manager	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Send bacteria sample into the lab for analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Send completed water quality report to ADEC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Required by regulations
	Check fire extinguishers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Check all alarm systems	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Perform smoke dot test and efficiency test on boilers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Critical during winter months
	Test pressure relief valve on hot water generator	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Order parts and supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Replace as used
	Clean all smoke and heat detectors in building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Twice a year
	Exercise valves in the plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Twice a year

Task	Daily	Weekly	Monthly	Yearly	Other	Notes for class discussion
Check the emergency lights in the building	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vacuum the coils of the dryers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remove lint from dryer screens	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check pH level of glycol in heating system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Grease bearing son dryer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Twice a year
Inspect lagoon for weeks and damage, repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lubricate external parts of filter Soko™ valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Clean coils on hot water regenerator, drain and flush tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Perform boiler maintenance on nozzle, electrode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Inspect and clean chimneys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Replace fuel filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Check the sand filter for mudballs, cracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Complete pre-winterization task list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Clean insects out of light fixtures and replace bulbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Call aDEC to check on operator certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Vacuum coils of the unit heaters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Clean bathroom exhaust fans and air ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Complete log entry for description of events	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Update inventory list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	As new equipment is purchased
Alternate pressure pumps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Measure reading on heat tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Record pressure, flow, and temp. in circulation loops	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record all water use meter readings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record electric meter reading	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Count and record tokens, in washers, dryers, showers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record water temperature from well	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exercise 2

OPERATIONS AND PM MANAGEMENT

Purpose	This exercise is designed to help the participants understand the value of the maintenance management process.
Format	This activity was designed for a small group activity using a prepared list of tasks. The group is required to perform work as a group and then report the results to all participants.
Time Requirement	There are two different sets of materials for this exercise: Old Rocky (simple), approximately 30 minutes River Bend (intermediate), approximately 45 minutes
Resources Needed	The instructor should first determine the knowledge level of that the participants and then select the appropriate level of exercise. Copy one list of operator tasks for each person
Background	<p>The participants will be given a list of daily and weekly tasks that need to be performed at a small community. They are to reduce the operator's time by one hour a day. They are to record the reason for the elimination or reduction of frequency of those tasks they remove in order to reduce the work load .</p> <p>Note that some groups may have difficulty doing this exercise because of a lack of background in knowing what are truly required or most important.</p>
Activity	<ol style="list-style-type: none">1. Divide the participants into groups.2. Provide each participant with a list of daily and weekly tasks.3. Each group is to select one person as the recorder.4. The group is to reduce the tasks as stated in the exercise.5. They are to record the reason for the removal of a task or the reduction in the frequency of performing the task.6. In addition they are to record the anticipated impact that this change will have on the expected level of service.7. After each group has completed the assignment gather all of the participants together for a discussion.8. Ask the group:<ul style="list-style-type: none">• Which tasks were eliminated or changed? Why?• What impact will this have on the level of service?• Could the same savings be obtained by reducing the number of hours that the utility office is open? What impact would that have on customer service?

Expect considerable discussion on the merits of removal or change of any of the tasks.

City of Old Rocky

Operator Duties and Issues

Description

This is a community of 300 persons in rural Alaska. The system includes a well, water treatment equipment, a washeteria and a lagoon. The operator is responsible for operating and maintaining all components of the water and wastewater system. Tasks to be completed include daily, weekly, monthly, and annual tasks as specified by the operation and preventive maintenance plan. This list of tasks was developed by the operator using information in the O&M manual, manufacturers' literature and the sampling plan.

The daily and weekly task lists and time allocation for operation of the water system is attached. Assume that the duration of the tasks shown is accurate. Tasks required by regulations include daily chlorine and fluoride tests, monthly bacterial tests, and a monthly report to ADEC.

In the past, the council has only been willing to approve the operator's salary for four (4) hours per day. In addition, the budget will not allow more help to be hired. You cannot require the operator to work more than 8 hours in any one day or more than 40 hours per week. According to the operator's calculations, daily hours needed to complete all tasks will total around 9 hours per day.

You are the manager and are responsible for deciding which tasks need to be completed. You may need to prioritize tasks or reduce the frequency of a task. Identify the items you plan to discuss with the operator in your effort to minimize operator hours without reducing service. Be prepared to justify and support your decisions.

City of Old Rocky Operator Duties Task List

Task description	Time to complete task
------------------	-----------------------

Daily

Test and record free chlorine residual	12 min
Check and record chlorine feed pump settings and chlorine mix level	8 min
Read and record water temperature	12 min
Read and record differential pressure of the sand filters	12 min
Check and record fluoride feed pump settings and fluoride crystal level	12 min
Test and record fluoride residual	12 min
Read and record system flow meter reading	12 min
Complete daily data input on water treatment operations report	12 min
Check water level of water storage tank	30 min
Check and record boiler pressure and temperature	15 min
Check level of fuel tank and transfer fuel to tank	60 min
Check watering point for normal operation	5 min
Check lagoon inlet pipe	30 min
Collect bacteria sample and send to lab	15 min
Check alarm panels and record readings	15 min
Perform smoke dot, efficiency and CO2 test on boilers	60 min
Inventory spare parts and supplies	60 min

Total daily requirements 382 min or 6.4 hours

Weekly Tasks

Check normal settings on aquastats	30 min
Backwash filters	120 min
Clean interior of building and windows	60 min
Clean water storage tank	600 min

Total weekly requirements 810 min or 13.5 hours

Daily requirements + 1/5 of weekly requirements = 9.1 hrs

City of River Bend Operator Duties and Issues

Description

This is a community of 300 persons in south central Alaska. The system includes a two surface water sources, (upper source and Fish Creek), a filtration building, disinfection by hypochlorite, a community septic tank and two sewage lift stations. Two operators are responsible for operating and maintaining all components of the water and wastewater system as well as providing street, building and vehicle maintenance. Tasks to be completed include daily, weekly, monthly, and annual tasks as specified by the operation and preventive maintenance plan. This list of tasks was developed by the operator using information in the O&M manual, manufacturers' literature and the sampling plan.

The daily and weekly task lists and time allocation for operation of the water system is attached. Assume that the duration of the tasks shown is accurate. Tasks required by regulations include daily chlorine and fluoride tests, monthly bacterial tests, and a monthly report to ADEC.

Your task is to reduce the operator requirements from 32.85 hours per week to 25 hours a week for the daily and weekly task and not more than 8 hours in any one day. Either eliminate tasks or change their frequency.

You are the manager and are responsible for deciding which tasks need to be completed. You may need to prioritize tasks or reduce the frequency of a task. Identify the items you plan to discuss with the operator in your effort to minimize operator hours without reducing service. Be prepared to justify and support your decisions.

River Bend Operator Duties Task List

Daily Task			
<u>Facility</u>	<u>Equipment</u>	<u>Activity</u>	<u>Hrs</u>
Upper Source	Flow Measuring Device	Inspect	0.25
Upper Source	Raw Water	Test Turbidity	0.1
Fish Creek	Raw Water	Test Turbidity	0.1
Upper Source	Raw Water	Test pH, Alk, Temp	0.25
Fish Creek	Flow Measuring Device	Inspect	0.25
Fish Creek	Raw Water	Test pH, Alk, Temp	0.25
Filter Building	Flow meter	Read and record	0.1
Filter Building	Strainer	Backwash	0.1
Chlorine Building	Flow Meter	Read and record flow meter	0.1
Chlorine Building	Chlorinator	Determine chlorine residual	0.1
Chlorine Building	Chlorinator	Quantity of chlorine used and calculate dosage	0.1
Distribution System	Finished Water	Check chlorine residual, sites 1 & 5	1.0
Filter Building	Finished Water	Test pH, Temp, Turbidity	0.25
Filter Building	Finished Water	Test Alkalinity	0.1
Distribution	Finished Water	Read and record system pressure	0.1
Lift Station	Station #1	Read and record hour meters	0.5
Lift Station	Station #2	Read and record hour meters	0.5
Total Daily Hours			4.5

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River Bend - Weekly Task

Facility	Equipment	Activity	Hrs
Monday			
Chlorine Building	Chlorinator	Transfer chlorine solution from 15 gallon tank to 40 gallon tank	1.0
Safety		Post Managers Safety Report	0.1
Safety		Update lost time accident board	0.1
Total			1.2
Tuesday			
Lift Station #2	Dehumidifier	Empty drain pan	0.1
Lift Station #1	Dehumidifier	Empty drain pan	0.1
Total			0.2
Wednesday			
Lift Station #2	Filter	Drain sedimentation filter on air compressor system	0.1
Management	Reporting	Staff report	1.0
Lift Station #1	Filter	Drain sedimentation filter on air compressor system	0.1
Upper Source	Raw Water	Jar Test -Sample site #20	1.5
Total			2.6
Thursday			
Fish Creek	Heating System	Check fuel level and fill as needed	0.25
Filter Building	Sock Filters	Backwash	0.5
Management	Meeting	Weekly Staff Meeting	4.0
Total			4.75
Friday			
Upper Source	Flow Measuring Device	Check Battery	0.25
Fish Creek	Flow Measuring Device	Check Battery	0.25
Chlorine Building	Building	Clean interior	1.0
Total			1.5
Total Weekly Hours			10.25

Total hours for the week Daily (4.5 hrs) X 5 + Weekly (10.25) = 32.75 hours

Exercise 3

BLUE MONDAY

Purpose	To demonstrate time management techniques. The focus of the exercise is to emphasize the need for good organizational skills in managing the routine activities of a utility.
Format	Individuals or pairs.
Time	:30
Resources Needed	<ul style="list-style-type: none">• One copy of the in-basket materials for each group.• One set of Instructions for each group• One February Calendar for each group.• One Daily To-Do List for each group.
Background	<p>Most managers of small utilities must wear multiple hats and respond quickly to a wide variety of issues. The most successful managers have developed processes for expediting activities. These processes commonly include some method of placing issues into groups and then scheduling action on the group or on a specific issue.</p> <p>This exercise places each participant in the position of a manager who has returned from a trip and must quickly organize the information in his/her in-basket.</p> <p>The exercise incorporates information on monthly reporting, time management, and organizational skills.</p> <p>Two person teams can speed this exercise along. They can share information and skills.</p>
Action	<ol style="list-style-type: none">1. Hand out one copy of the in-basket information to each person or team.2. Direct the participants to read the instructions and proceed with the exercise.3. At the end of the designated time stop the action.4. Start the discussion by asking, What action did you take first? Why? As you begin to listen to answers, there will undoubtedly be a wide range of differences. Take care to point out that differences in handling this exercise do not necessarily mean that some answers are wrong. By listening to others reasoning, previously unconsidered avenues for handling the situation may be opened up. This will benefit the entire group.

BLUE MONDAY — INSTRUCTIONS

For the purpose of this exercise, you are to assume the role of the utility manager, Pat Simpson, of Rocky Road Utilities. You are also the manager of the city.

As the manager of the utility, you report directly to the council.

The following people report to you:

- John Powell, the water plant operator -works 6 hours a day
- Jay Snyder, street and building maintenance and alternate operator - 4 hours a day
- Jamie Crossman - utility clerk

All are capable people and have been in their respective jobs for three or more years.

The Situation:

Today is February 5. You have been out of town for several days. You have arrived at the office at 8 a.m. (early) to catch up and get ready for the day. The normal working day begins at 9 a.m.

At 9 a.m. you must leave to meet two PHS representatives that are flying in from Anchorage. You are not expected to return to the office until 1 p.m. At that time you will have completed your meeting with PHS.

You have a several meetings and actions already scheduled on your monthly schedule.

The clerk serves as your assistant.

Action:

Go through the in-basket material. Take whatever action is needed, assuming you are the manager. Use your own experience as a basis for your decision. Enter scheduled activities onto the Daily To-Do List and on the monthly calendar.

Make notes to yourself or to others by writing directly on the messages, letter, or memo or by attaching notes. Draft or write letters and memos where appropriate. Note any phone calls you plan to make, including information about when you plan to make the call and whom you plan to call. Note follow-up dates where further action is necessary. Write on the items themselves where you want them sent such as "Follow-up on 12/15" or "File."

Remember:

- You are the utility manager.
- Today is February 5.
- You are in the office before regular working hours. There is no one else available to help or to call, nor is there anyone to interrupt you.
- You want to get as much out of the way as possible in the one hour you have to spend organizing.
- Record every action you make or intend to make.
- Be prepared to discuss, with the group, how you handled the exercise.

Operations Management I & II

BLUE MONDAY — materials

DAILY - TO-DO-LIST

Monday, February 5

8:30	10:30 <i>PHS - Meeting</i>	1:00	3:00
9:00 <i>PHS - arrive at airport</i>	11:00 <i>PHS - Meeting</i>	1:30	3:30
9:30 <i>PHS - Meeting</i>	11:30 <i>PHS - Meeting</i>	2:00	4:00
10:00 <i>PHS - Meeting</i>	12:00 Noon <i>PHS - depart 11:45</i>	2:30	4:30

BLUE MONDAY — materials

February Calendar

S	M	T	W	T	F	S
				1 <i>Out of Office</i>	2 <i>Out of Office</i>	3
4	5 <i>PHS 9-12</i>	6 <i>Staff Meeting 9:00</i>	7	8 <i>Council 7:00</i>	9	10
11	12 <i>Draft - Operatio * Plan</i>	13 <i>Staff Meeting 9:00</i>	14	15	16	17
18	19	20 <i>Staff Meeting 9:00</i>	21	22 <i>Council 7:00</i>	23	24
25	26	27 <i>Staff Meeting 9:00</i>	28			

Operations Management I & II

BLUE MONDAY — materials

IMPORTANT MESSAGE ①

FOR Utility Manager A.M.

DATE 1/30 TIME 10:15 P.M.

Mr. Scott Ruby

OF DCRA

PHONE 907 269-4567 113
AREA CODE NUMBER EXTENSION

☒ TELEPHONED
☐ CAME TO SEE YOU
☐ WANTS TO SEE YOU
☐ RETURNED YOUR CALL

☒ PLEASE CALL
☐ WILL CALL AGAIN
☒ URGENT
☐ SPECIAL ATTENTION

MESSAGE Problem with last years budget -
may impact grant application for water tank

SIGNED JC

IMPORTANT MESSAGE ②

FOR Utility Manager A.M.

DATE 1/29 TIME 1:15 P.M.

Mr. B. Fallon

OF _____

PHONE _____
AREA CODE NUMBER EXTENSION

☒ TELEPHONED
☐ CAME TO SEE YOU
☐ WANTS TO SEE YOU
☒ RETURNED YOUR CALL

☐ PLEASE CALL
☐ WILL CALL AGAIN
☐ URGENT
☐ SPECIAL ATTENTION

MESSAGE _____

SIGNED JC

IMPORTANT MESSAGE ③

FOR Utility Manager A.M.

DATE 1/31 TIME 3:45 P.M.

Mr. Simon

OF _____

PHONE _____ 864-3353
AREA CODE NUMBER EXTENSION

☐ TELEPHONED
☒ CAME TO SEE YOU
☒ WANTS TO SEE YOU
☐ RETURNED YOUR CALL

☒ PLEASE CALL
☐ WILL CALL AGAIN
☐ URGENT
☒ SPECIAL ATTENTION

MESSAGE Please call as soon as you return.
She has a problem with there water and
sewer bill and with a smell in the water

SIGNED JB

IMPORTANT MESSAGE ④

FOR Utility Manager A.M.

DATE 2/1 TIME 9:15 P.M.

Mr. Mike Green

OF PWS

PHONE 907 549-4597 333
AREA CODE NUMBER EXTENSION

☒ TELEPHONED
☐ CAME TO SEE YOU
☐ WANTS TO SEE YOU
☐ RETURNED YOUR CALL

☒ PLEASE CALL
☐ WILL CALL AGAIN
☐ URGENT
☐ SPECIAL ATTENTION

MESSAGE Call ASAP - about trip on 2/5 -
want to confirm that you have all of the info
they will need

SIGNED JC

BLUE MONDAY — materials

River Bend Utility Monthly Report

⑤

Month of *January*

Prepared by *John Powell*

Water System

Water Consumption *1.24 MGD* Max day *55,000 gal* Min day *32,000 gal* Avg day *40,000 gal*

Last month *1.11 MGD* *11.7%* Increase Last Year *1.45 MGD* *16%* Decrease

Comments on Consumption

Reduction in consumption due to warmer weather and repair of leaks this last summer

Power Consumption

7,800 KWH Last year *8,200 KWH* *158 gal/KWH*

1,240 gallons of fuel oil

Chemical use

78 lbs of chlorine *25 lbs* of fluoride

Wastewater System

Water Treated *1.6 MGD* Max day *62,000 gal* Min day *43,000 gal* Avg day *51,000 gal*

Power Consumption

1,295 KWH Last Year *1,120 KWH* *1.235 gal/KWH*

Labor

Operations *74 Hrs* PM *40 Hrs* Repair *26 Hrs*

70% Water and *30 %* wastewater

BLUE MONDAY — materials

ACE Accounting

6

12589 Gilmore St. Fairbanks, AK

January 22, _____

Pat Simpson
Utility Manager
Rocky Road Utility
P.O. Box 333
Rocky Road, AK 99999

Dear Pat:

Glad to hear that the water tank and circulation pump replacement went well and all equipment is up and running.

In preparation for the audit this fall I need the engineers estimate of the new value of these assets, their life expectancy and the asset identification numbers.

Could you forward this information to me at your earliest convenience.

Sincerely,

Mike Bloomfield

BLUE MONDAY — materials

Wander Ware Engineering

44567 Old Seward Highway
Anchorage, AK 99999

John Powell, Operator
Rocky Road Utility
P.O. Box 333
Rocky Road, Alaska 99999

Pat
Here is the asset
information from last
summer.
I added the asset numbers
John

⑦

January 15, _____

As you requested here is the information on the value and life expectancy of the major equipment.

Please add the asset identification numbers and forward this letter to Pat.

Item	Life	Value	Asset Number
Water Tank	40 Years	\$350,000	<i>1024</i>
Recirculation Pumps	30 year	\$15,000	<i>1122, 1132, 1142</i>
Pump motors	10 years	\$6,000	<i>1121, 1131, 1141</i>
Electrical Equipment	20 years	\$7,000	<i>1160</i>
Piping and etc.	30 years	\$9,000	<i>1190</i>
Meters	10 years	\$1,500	<i>1123, 1133, 1143</i>

Call if you need more information.

Bill

Operations Management I & II

BLUE MONDAY — materials

8

Work Order #		Rocky Road Utility - Work Request				W.R. # 1996-103	
Requested By	John	Init Date	2/2/96	Equipment	2134	Facility ID	2100
Problem	Replace impeller on lift station - pumping rate is down and there is excessive vibration						
Requested Completion Date		Scheduled Start Date		Scheduled Completion Date		Priority	Status
2/25/96						1	R
Assigned To		Actual Completion Date				Status - R=Requeste, S=Scheduled, C=Completed, I=In progress, X=on hold	
Estimated Labor							
	Skill	# of People	Hours	Rate	Cost	Actual Hours	Actual Cost
#1	Operator	2	8	\$12.00	\$96.00		\$0.00
#2							
#3							
Total Labor Estimate				\$96.00	Actual Labor Cost \$0.00		
Estimated Materials				Actual Materials			
Qty	No.	Description	Cost	Qty	No.	Description	Cost
1		Impeller	\$750.00				
1		Volue gasket	\$1.75				
		Frighht	\$68.00				
Parts Cost			\$819.75				
Estimated Equipment		Hours	Rate	Actual	Cost		
Equipment Total Cost				Actual Equipment Cost			
Total Estimated Cost \$915.75				Total Actual Cost \$0.00			
Approved By _____				Completed _____			
Date _____				Date _____			

Pat
Need this approved as soon
as possible

John

BLUE MONDAY — materials

Memo

9

From: Jamle
To: Pat
Date: 2/1
Subject: Maintenance Budget

In looking at the end of December Monthly report, I noticed that 80% of the sewer maintenance/repair budget has been expended. Only 15% of the water maintenance/repair budget has been expended.

BLUE MONDAY — materials

10

Memo

From: Mayor - Jones
To: Utility Manger
Date: 2/1
Subject: Personnel Issues- **Confidential**

In observing the crew for the past week I note that John Powell and Jay Snyder where both late by at least one hour three days last week.

In addition, John Powell called in sick on Tuesday. In checking the records with Jamie I notice that this brings his total of sick days to 19 which is two more that is allowed.

I suggest that you compare the time sheets to verify that the time was made up or not recorded. In addition, I suggest that you discuss what appears to be an excessive use of sick time.

Please advise me of your findings.

BLUE MONDAY — materials

Department of the Treasury
Internal Revenue Service

11

Ogden Service Center

1160 W 1200S, Ogden, Utah 84201

OMB Clearance No. : 9872-0050

July 15, 1996

In reply refer to: 98458710365

LTR 0099C

EIN: 92-2694500

TAX YEAR: 1991

Rocky Road Utilities
%Pat Simpson
P.O. Box 333
Rocky Road, AK 9999

Dear Taxpayer:

Our records for the tax year listed above show that the totals you reported on the following statements do not agree with the amounts you reported on the tax return(s) for the same year. The information is shown below.

Statements filed with the Social Security Administration (SSA):

Form W-2, Wage and Tax Statement

Tax return(s) filed with IRS:

Form 941, Employer's Quarterly Federal Tax Return

	Totals from Tax Forms	Totals from W-2 Statements	Difference
Social Security Wages	\$108,290.25	\$150,151.26	\$41,861.01
Federal Income Tax Withheld	\$8,240.00	\$17,560.00	\$9,320.00
Medicare Wages	\$198,988.33	\$202,555.55	\$3,567.22

If you made a mistake on the statements you filed, please do the following:

1. Complete Form(s) W-2c, Statement of Corrected Income and Tax Amounts
2. Complete Form W-3c, Transmittal of Corrected Income and Tax Statement.
3. Send us Form W-3c and copy A of Form(s) W-2c with a copy of this letter.
4. Give a copy of Form W-2c to each affected worker.

If you correctly filed your statements, prepare a note explaining the difference between the statements and your tax returns. Send the note to us with a copy of this letter. We are enclosing an envelope for your convenience.

The amounts reported on your tax return(s) show less tax due than the amounts you reported on the statement(s) you filed. If we do not hear from you, we will increase the amount you owe, based on your statements.

Operations Management I & II

BLUE MONDAY — materials

July 15, 1996
In reply refer to: 98458710365
LTR 0099C
EIN: 92-2694500
TAX YEAR: 1991

If you overpaid or underpaid Social Security Tax, complete Part III of the enclosed Form 941c, Statement to Correct Information. Return one copy with this letter.

Please send this material by Aug 11, 1996 to ensure that all amounts are properly credited. If previously reported wages or taxable tips subject to Social Security Tax are incorrect. We will advise the Social Security Administration so your employees receive proper coverage.

If you have questions about this letter, please write us at the address shown above. If you prefer, you may call the IRS telephone number listed in your local directory. An employee there may be able to help you, but this office is most familiar with your case.

Whenever you write, please include your telephone number, the hours you can be reached, and this letter. Keep a copy for your records.

Telephone Number _____

Hours _____

Thank you for your cooperation.

Sincerely yours,

Hanna Barberra
Chief, Correspondence Section

Enclosures:
Copy of this letter
Envelope
Forms W-2c and W-3c
Form 941c

BLUE MONDAY — materials

RESOLUTION 96-29

DRAFT

12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
RIVER BEND, SUPPORTING SEARCH & RESCUE GRANT REQUEST

WHEREAS, the City of River Bend desires to maintain a viable search and rescue team; and

WHEREAS, it is necessary for this team to be equipped with appropriate and adequate equipment, and

WHEREAS, the Search and Rescue team is of vital importance to the health of the community, and

WHEREAS, the financial conditions of the community do not allow River Bend to purchase this equipment.

NOW, THEREFORE, BE IT RESOLVED BY THE RIVER BEND CITY COUNCIL AS FOLLOWS:

The City of River Bend supports the Search and Rescue teams grant request for new equipment. This equipment will replace existing damaged and worn equipment. In addition, these funds will be used to purchase new equipment that will improve the efficiency of the team.

*Pat
Here is the draft resolution
on the search and rescue
grant. Please review,
correct and have ready for
the council meeting.
The Mayor*

PASSED AND APPROVED BY THE CITY COUNCIL

IN WITNESS THERETO:

ATTEST:

APPROVED:

BLUE MONDAY — materials

Time Management Problems

13

(900 managers from 9 countries)

Major Time Problems in Order of Importance

Telephone Interruptions: In addition to an excessive number of calls, many conversations tend to be long-winded. Difficulties also occur in placing outgoing calls.

Meetings: Many are unnecessary, too long, and /or badly run

Unexpected visitors: To many persons, colleagues, and others, drop in without prior notice or appointment.

Poor delegation: Work that could be done by subordinates as often not delegated properly or at all.

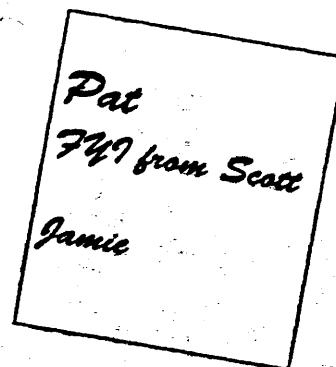
Crises: Unexpected problems disrupt or cancel planned work schedules.

General Time Patterns

Managers spend an average of 51 hours weekly in their jobs. This includes:

- A regular work week (5 days) of 48 hours 2 minutes.
- Weekend chores add nearly three hours (3 hours 58 minutes).
- Interruption free periods (excluding time at meetings) averaged only 29 minutes.

Source: *Management Review*, October 1980, Page 26



BLUE MONDAY — materials

BLUE MONDAY - SUGGESTED ACTION PLAN

Item No.	Make the following notations on Memos/Letters/Messages/etc.	Make the following notations on Daily to-do/Calendar, etc	Place the item in designated place
1	Return call 1:15 Jamie - pull a copy of last years budget for my call at 1:15	Under 1:00 - Call Scott Ruby 269-4567 X 113	Place in Jamie's in-basket
2			Discard
3	Jamie - Call Ms Simon ask her to come in at 10:30 tomorrow	Under Feb 6 - meeting Ms. Simon 10:30 Make note in staff meeting agenda to discuss this problem	Place in Jamie's in-basket Make note in
4			Discard
5	Jamie - please pull last months cost so I can provide council report - Need at 2:00 pm	Under 2:00 - write managers report for council	Jamie's in-basket
6	Clip with #7 - Note - Jamie Send a copy of Bills letter to Mike - Return Orig. to me	Note in staff meeting agenda John - did you enter this data Into your asset files Feb 8 - Update asset files	Jamie's in-basket
7	Combine with six		
8	Note - for staff meeting Note to Jamie - Please get me the list of maintenance/repair cost for the past year Need for staff meeting	Note in staff meeting agenda Discuss this need and financial status - see item 9	Staff meeting folder
9	Clip with #8		Staff meeting folder
10	Note to Jamie - Need meeting with John at 4:00 and Jay at 4:30	Under 4:00 - meeting with John Under 4:30 - meeting with Jay Feb 6 Follow-up with mayor	Folder in desk drawer
11	Note to Jamie - Please follow up Get back to me by end of day Feb 8	Under Feb 8 check on IRS issue	Jamie's in-basket
12	Note - Complete on Feb 7	Under Feb 7 - block 2 hrs Work or resolution	To-do - Feb 7
13			Inside day-timer

Exercise 4

CONTINGENCY PLAN

Purpose	To provide insight into why a contingency plan is valuable to a utility and community.
Format	Small groups (4 to 6)
Time Requirement	0:45
Materials Needed	<ul style="list-style-type: none">• A copy of the ADEC Letter for each student• Boil water notice letter and poster by ADEC• Snowy Slough Water Bacteriological Contamination procedure example• flip chart, white board etc. available to each group• Copy of DEC drinking water Regulations
Background	This exercise is based on a receipt of a notification from DEC that the community is in violation of the SDWA bacteriological requirements and must issue a boil water notice. The groups are to develop a plan of action for the current situation, and ideas for contingency planning for the future. The intent of this exercise is to emphasize the need for developing contingency plans for common emergencies.
Sequence	<ol style="list-style-type: none">1. Divide the participants into groups of 4 to 6.2. Provide each individual with a copy of the “ADEC Notice of Violation” letter.3. Instruct the group that they have twenty minutes (20) to develop an action plan for handling this problem. They are to write the steps of this plan on a flip chart page, or whatever is available.4. After twenty minutes, post the pages and go over the steps.5. Ask the question:<ul style="list-style-type: none">• What would they write into their contingency to make this task any easier?6. Hand out a copy of the Snowy Slough Bacteriological Contamination Procedure and a copy of the DEC letter and poster. Ask for comments on the usefulness of the plan.

STATE OF ALASKA
DEPT. OF ENVIRONMENTAL CONSERVATION
Division of Environmental Health
Drinking Water Program

TONY KNOWLES, GOVERNOR

410 Willoughby Ave., Ste 105
Juneau, AK 99801-1795
PHONE: (907) 465-5065
FAX: (907) 465-5070
<http://www.state.ak.us/dec/home.htm>

August 5, 1996

Mr. John Doe, operator
River Bend Utilities PWSID # 012345
Box 123
River Bend AK 99999

SUBJECT: BOIL WATER NOTICE

Dear Mr. Doe,

The Department was informed that there was an equipment failure at the water treatment plant and that adequate disinfection was not taking place for a period of time resulting in a positive fecal coliform bacteria test result. As a result of this test a boil water notice needs to be issued as per State of Alaska drinking water regulations. Please disseminate the notice as soon as possible according to your contingency plan, so that all residents are aware of the problem, know what to do about it and have idea of when the problem might be fixed.

Your cooperation in this public notice is appreciated. If you have any questions, don't hesitate to call and ask.

Sincerely,

Sandy Tation
Environmental Specialist

P.S. We highly recommend that replacement parts be kept on hand for your chlorinator, or even a spare chlorinator unit so that the risk of serving improperly treated water to your customers is reduced.

CONTINGENCY PLAN — Snowy Slough Policy

SNOWY SLOUGH - BACTERIOLOGICAL CONTAMINATION - PROCEDURE

Hazard

The presence of Coliform in a water system is cause for concern that the system be contaminated. When fecal Coliform are found in a water system it is a confirmation that the system has been contaminated by the fecal material from a warm blooded animal (not necessary human). When Coliform are present in drinking what there is a high probability that waterborne pathogens are also present.

Violations

This procedure is to be used when there is a notification that the system has violated the Total Coliform Rule. There are two types of violations that cause this procedure to be implemented:

- Positive results of a Coliform sample and of the repeat samples.
- Positive Fecal Coliform samples

In addition, this procedure could be followed with any suspected biological contamination of the distribution system.

Types of Violations

There are two types of violations:

- Tier 1, Acute
- Tier 1 Non-Acute.

A Tier 1 Acute violation exist when there is a confirmed fecal positive result found on a Coliform sample. A Non-Acute violation exist when there is a violation of the Coliform MCL but there are not fecal Coliform bacteria present.

Two Step Approach

There are basically two steps to resolving bacteriological contamination problems:

- Notify the customers so they are protected, and
- Locate the source of the contamination and remove it.

PROCEDURE - NOTIFICATION

Notification

Notification of a violation may be received from the laboratory or from the regional DEC office. In any case when a notice of violation is received the Incident Command Center will be activated.

1. The Incident Commander will notify DEC and the laboratory of the violation and confirm that they are available to help solve the problem.
2. Step two will be different for acute or non-acute health risk.

CONTINGENCY PLAN — Snowy Slough Policy

ACUTE HEALTH RISK

Radio

3. The Incident Commander will send a written notice to the K____ Public Radio on ____ AM within 72 hours of determining that there is a violation. The station is located at It is preferred that this notice be sent within 4 hours of the receipt of the information and should be sent by fax.

Hand-bill

4. In addition to the radio message, copies of the written notification will be posted at the _____ Post office, City Hall, restaurants, harbor, clinic, fire hall, police department and harbor office. In addition, copies of this hand-bill will be made available at city hall. This posting will be completed within 72 hours of the determination of the violation. (It is preferable that this posting be done within the same working day that the notice was received)

Mailed with Bill

5. In addition, the Utility will insert a copy of this hand-bill with the next regular utility bill.

MCL VIOLATION NOT ACUTE HEALTH RISK

Hand-bill

1. When the Utility has determined that it is in violation of a MCL that is not considered to be a health risk, the Incident Commander will prepare a written hand-bill and have it posted at the _____ Post office, City Hall, restaurants, harbor, clinic, fire hall, police department and harbor office. In addition, copies of this hand-bill will be made available at city hall. This posting will be completed within 72 hours of the determination of the violation.

Mailed with Bill

2. In addition, the Utility will insert a copy of this hand-bill with the next regular utility bill.

CONTINGENCY PLAN — Snowy Slough Policy

SNOWY SLOUGH - PROCEDURE FOR CONTAMINATION

Analysis Data

Analyze the bacteriological results and chlorine residuals in an attempt to isolate the area containing the problem.

Isolated Situation

If the contamination appears to be in an isolated area flush that portion of the system and test resulting chlorine residuals.

System Wide

If the contamination appears to be system wide then obtain a raw water bacteriological sample, super chlorinate the raw water (5 mg/L or more) and flush the entire system.

- Take bacteriological samples
- If negative, the probable cause was a failure of the chlorine system or a heavy contamination at the source.

Chlorine Residual

If the utility is unable to maintain a chlorine residual in any one portion of the system, shut down that portion of the system or shut off individual customers. Once the utility has isolated one portion of the system and is able to maintain a chlorine residual the remainder of the system, you have generally isolated the problem.

- Re-supply this portion of the system through a fire hydrant connected to the unaffected portion of the system.
- Flush this portion of the system
- Shut off all services and super chlorinate to 5 mg/L concentration.
- Flush the system and take a bacteriological sample. If the sample is negative, turn on the services one at a time until you see a sudden drop in chlorine residual at the customers faucet. This is most likely your contaminated source.

Problem Solved

Once the problem has been resolved and the Coliform samples are routinely negative the public notice may be removed.

CONTINGENCY PLAN — Public Notice

PUBLIC NOTICE

RIVER BEND UTILITIES PUBLIC WATER SYSTEM #12345

The water sample(s) from River Bend Utilities public water system taken on August 1, 1996, shows that the water may not be safe for consumption.

The Department of Environmental Conservation (DEC) sets drinking water standards and has determined that the presence of fecal coliforms or E.Coli is a serious health concern. Fecal coliforms and E.coli are generally not harmful themselves, but their presence in drinking water is serious because they usually are associated with sewage or animal wastes. The presence of these bacteria in drinking water is generally a result of a problem with water treatment or the pipes that distribute the water, and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice and associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water.

DEC has set an enforceable drinking water standard for fecal coliforms and E.coli to reduce the risk of these adverse health effects. Under this standard, all drinking water samples must be free of these bacteria. Drinking water which meets this standard is associated with little or none of these risks and should be considered safe.

The Alaska Department of Environmental Conservation hereby issues **"BOIL WATER NOTICE"** to River Bend Utilities public water system. **ALL WATER USED FOR DRINKING, FOOD PREPARATION, DISH WASHING, KITCHEN AND/OR RESTAURANT CLEAN-UP MUST BE BOILED FOR 2 MINUTES BEFORE USE.**

THIS "BOIL WATER NOTICE" IS EFFECTIVE TODAY AUGUST 5, 1996 UNTIL FURTHER NOTICE.

Water Treatment Operator
River Bend Utilities

CONTINGENCY PLAN — Public Notice Poster

BOIL WATER NOTICE

Samples from River Bend Utilities public water system show that the water may be contaminated.

This BOIL WATER NOTICE is in effect August 5, 1996 until further notice.

Boil water 2 minutes before drinking

For more information call the Alaska Dept. of Environmental Conservation office in Juneau at 465-5326.

Dept. of Environmental Conservation
410 Willoughby Ave.
Juneau, AK 99801

Exercise 5

WALK THROUGH WASHETERIA

Purpose	To demonstrate that there are solutions when a "problem is broken"
Type of Activity	This exercise is a case study evaluation for small groups.
Time Requirement	45 minutes
Resources Needed	<ul style="list-style-type: none">• Case study sheet• Chart pack and pens for each group• Sample solution sheet
Background	<p>Many times a new manager will inherit a problem, or there will be a long history of a problem that has never been dealt with. Eventually, the problem has to be dealt with, but by then it is so complex that it is hard to find out where to start.</p> <p>This scenario presents a complex problem and as a group allows the manager to see that there are steps that can be taken to start to fix the problem.</p>
Activity	<ol style="list-style-type: none">1. Hand out the case study scenario and have the group read it.2. The groups should write on a flip chart the steps they would take to resolve the problems in the case study.3. Post the flip charts on a wall.4. Discuss in a large group, what each group decided. Ask the following questions.<ul style="list-style-type: none">• What have you learned about maintenance management?• What have you learned about communication?• What have you learned about customer relations?5. Hand out the sample solution key. There is not one correct solution.

WALK THROUGH WASHETERIA – Situation Sheet

You are the manager in a rural Alaska community of 350 people. The system includes a well, water treatment equipment, a washeteria and a lagoon. The dryers in the system are hydronic (hot water). The operator is responsible for operating and maintaining all components of the water and wastewater system. The operator has a preventative maintenance plan delivered by the RMW and presented to the council six months ago.

You have received complaints in the office today from three community residents who went to the washeteria and could not do their laundry and one who could not take a shower, all because of out of order signs posted at the facilities. In addition, this morning you opened a letter from ADEC about your community not doing the required water sampling. And last night at the council meeting, council members asked you how much water was produced this month and you could not provide this information.

There is no phone in the washeteria so you decide to walk over to the washeteria and talk with the operator. When you arrive you can not find the operator. You briefly walk around inside the building and notice a few things that concern you. There are out of order signs on two of the three washers and one of the three showers. The door to the treatment equipment is unlocked. You walk into this area and notice that one of the boilers is taken apart. You also notice a stack of sampling bottles and papers all over the desk. The tool box is on the floor open and there are tools nearby as well as on the desk and near the boiler.

Your group needs to decide what would you do to address the situation, specify action items, responsible individuals, and a time line. Be prepared to justify your decisions.

WALK THROUGH WASHETERIA – Solution Suggestion

Here are the recommended steps to solve this series of problems.

Go back to the office and review the PM plan copy that you got six months ago. All of the items needing work should be included on the PM plan.

Find the operator and ask him/her to explain what is going on.

Discuss the washers and showers first. Explain that when these are shut down it is critical because this is one of the primary sources of revenue for the system and it also directly impacts customer service.

Then address the boilers. These are critical for building heat, add heat to the water, the dryers.

Discuss the letter you received from ADEC. Are the bottles on site? Have the samples been taken? If not, why not? Is the operator following a schedule for required testing? Is there someone you can call for assistance on testing and sampling questions?

Discuss the unlocked door and the tools. The door should be kept locked and the tools stored safely. These are the system assets and should be protected. In addition, there are safety issues involved. What if a kid went in the back and stuck his finger in a moving part? What if tools are stolen or things are vandalized? Realize that the council would have to pay for this.

Other general things that should be addressed are the following: Are spare parts on hand or must they be ordered? How can communication be improved between the manager and the operator? Is the operator completing maintenance on equipment in the facility? Where is the operational data and what can be done to make sure the manager receives a monthly summary report?

Exercise 6

COMPUTERS AND UTILITIES

Purpose

Provide an awareness of the pros and cons of automation using computers.

Format

small groups

Time Requirement

:45

Resources Needed

- List of uses of computers
- Make sure most of the students are computer literate before doing this game.

Background

This exercise is designed for small groups to allow them to explore the pros and cons of automating common utility management tasks with a computer.

Activity

Follow these steps:

1. Divide the participants into groups. Try to spread the computer savvy students among the computer phobic so the latter will not be left without help.
2. Provide each participant with a copy of the uses of computers sheet.
3. Direct the group to first: Identify other uses for computers in utility management and operations. Then brainstorm the pros and cons of using computers for each of these activities.
4. When they have completed this part of the exercise, open the discussion on the pros and cons of computers. Also, ask who is using computers and for what purposes. What problems have they found? What advantages are they observing?

COMPUTERS AND UTILITIES – fill-in sheet

The following is a brief list of common utility uses for computers. Add to the list if you can and identify the pros and cons of the use of computers for each of these tasks.

<u>Task</u>	<u>Pros</u>	<u>Cons</u>
Cash register (writing receipts)		
Customer billing		
Operations (data analysis)		
Budget preparation		
<u>Task</u>	<u>Pros</u>	<u>Cons</u>

Operations Management I & II

Inventory control		
Payroll		
Accounting		
Monthly Reports		
Letters (Correspondence)		

Exercise 7

CALENDAR BRAINSTORM

Objective To emphasize time management and planning to enable a manager to handle utility and community events

Time needed :15

Materials needed Flip chart, writing board, or overhead for class, plus paper and pen for each student.

Format Individually

Instructions

1. Have the students think up and write down as many time commitments they might have to plan for as a utility manager, things you would put on a wall calendar. You may want to write this instruction on a flip chart etc. and have it where all can see.

2. After 5 minutes, compile the responses at the front of the room as you discuss what the students learned about time management.

3. End the exercise by reemphasizing the importance of using a calendar to track and prepare for important meetings, events and deadlines, and having that calendar where others can see it and plan for various events.

Here are some examples of things that would go on a utility manager's calendar:

vacations for manager and staff

paydays

training

trips

meetings

birthday, anniversaries etc.

project deadlines

reports

appointments

sampling due dates

tax payments

tax return

holidays

community events

budget development

elections and preparation

grant deadlines

evaluations, audits

permit renewal dates

certification renewals

construction project milestones

tours

Exercise 8

OBJECTIVE RISK ASSESSMENT

Objective

To become aware that good decision-making about contingency planning starts with an objective analysis of several factors.

Time needed

0:30-0:40

Materials needed

flip chart writing board, or overhead for class, plus pen and note pad for each group

Format

As a class, or in small groups

Instructions

Brainstorm potential contingencies a rural Alaska utility might face. When about 10 or 15 have been written down, use the chart on the next page to rate the following for each contingency: (copy chart onto transparency or redraw it on board or flip chart as appropriate.)

1. Likelihood of the event happening. Rate high, moderate or low, or use a return time such as once in 25 years.
2. Impact on utility if event happens. Rate as high, moderate or low.
3. Cost of protecting against the impact described. Rate as high, moderate or low. (consider *all* costs are not just monetary costs.

Look at each contingency in light of the three factors. Does this help answer the question of whether or not the utility should protect against the event? Keep in mind that there are so many combinations of factors and so many different ways to value each one, that different, but equally valid conclusions are bound to be drawn by different people. What is important is base decisions on a systematic evaluation of the most complete information possible.

[illegible]

Exercise 9

OUT TO SEA

Objective	To improve familiarity with parts and functions of a utility and how using this knowledge can improve utility management.
Time needed	40 minutes
Materials needed	flip chart
Format	two teams
Instructions	<p>Choose two willing nautically inclined captains and have them choose their crew by alternating choices. (You could ask if anyone knows how to row a boat, and thus draw out “volunteers” to be captains) The two crews sit across the room from one another. The instructors are a maritime review board assembles to review their records.</p> <p>Call the meeting to order and give the crew the following briefing: “According to your records, you have never had a successful voyage. The Coast Guard has repeatedly had to rescue you. Although the Coast Guard enjoys their hero status, it has become too costly to continue to bail you out. Unless you buck up and learn the rules of the sea, your next mayday might fall on deaf ears.”</p> <p>Ask the captains if they have reasons for their nautical disasters. List them on a flip chart. (ran out of fuel, lost in the fog, GPS stopped working, navigator screwed up...)</p> <p>After they have listed all their excuses, advise them that there is never a good reason for navigation failure. Most emergencies are a result of human error.</p> <p>Pass out the following page (or put on overhead, flip chart etc.) Have the students find the corresponding function of utility or government for each of the nautical terms. For example, the captain is the utility manager.</p> <p>Explain that the nautical tools on the list allow for safe navigation in the most treacherous waters. The ship might have to adjust course periodically, but they can get back on course easily. Just as the captain and crew navigate from point to point, the manager, policy making body, and staff can maneuver through the fiscal year safely with no wrecks if they use their tools.</p> <p>When the two crews have completed the assignment, ask the captains to speak for their crews in a battle with the other ship. Taking turns, ask for the answers to the matching. A correct answer scores a hit on the other ship. The maritime review board has final say on answers. If the crew up misses, the other ship can score the hit if they answer it correctly, and then get their regular turn. The ship scoring the most hits sinks the other ship.</p> <p>Wrap up the exercise by referring back to their excuses. Remember, there is never a good excuse for failure. Fog, storms, ice and equipment failure are not valid reasons for a wreck. If need be a ship can set anchor and ride out a storm. Contingency plans are an integral part of running a utility. It’s a matter of staying on course.</p>

OUT TO SEA – matching functions

___ chart	a) policy making body
___ navigation aids	b) July 1 (new fiscal year)
___ destination	c) title 29, statutes, constitution
___ ship's officers	d) state and federal agencies
___ home port	e) equipment or personnel problems
___ course correction	f) monthly financial statements
___ officer's meeting	g) certified financial statement
___ captain	h) year end
___ ship's rules	i) electric utility
___ maritime law	j) budget amendment
___ ship's log	k) policy making body meeting
___ engine room	l) utility and other local ordinances
___ storms	m) manager
___ Coast Guard	n) annual budget

Chart: At sea a map is referred to as a chart. It gives directions, distances, water depth, surrounding terrain and landmarks, navigational aids etc., that allow safe navigation from one point to another.

Navigation aid. Any marker such as a buoy or light that can show the proper course.

Course correction: To alter course to get back on track.

Maritime law: The law of the sea governing navigation and commerce on the high seas. It is based on customs and usage compiled since the Middle Ages.

Ship's log: The journal of events on a ship, such as speed, direction, weather and activities of the ship. It is updated daily and reviewed at the end of the voyage by the owners of the ship or others interested in the history of the voyage.

Out to Sea – answer sheet

- | | |
|------------------------|---------------------------------------|
| _n__ chart | a) policy making body |
| _c__ navigation aids | b) July 1 (new fiscal year) |
| _h__ destination | c) title 29, statutes, constitution |
| _a__ ship's officers | d) state and federal agencies |
| _b__ home port | e) equipment or personnel problems |
| _j__ course correction | f) monthly financial statements |
| _k__ officer's meeting | g) certified financial statement |
| _m__ captain | h) year end |
| _c__ ship's rules | i) electric utility |
| _c__ maritime law | j) budget amendment |
| _g__ ship's log | k) policy making body meeting |
| _i__ engine room | l) utility and other local ordinances |
| _e__ storms | m) manager |
| _d__ Coast Guard | n) annual budget |

Operations Management I — Worksheet

1. Operations refers to the _____ of running a utility.
2. Maintenance can be classified into two types: _____ ,
and _____ .
3. A primary portion of the maintenance management (MM) system is focused on
_____ operations tasks and maintenance.
4. The MM system is one of the most effective methods of determining the
_____ that the utility can afford to deliver.
5. List at least two roadblocks to the development of a MM plan:

6. What are the six components of a maintenance management system?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
7. An effective maintenance management system must be based on a maintenance management
_____ developed by the manager and operator and approved by the

8. The heart of the MM System is the _____
plan.

Operations Management I & II

9. Reviewing O & M manuals, sampling requirements, renewal and replacement schedule, and safety program requirements are all ways to identify the _____
10. Leveling the work load means _____ tasks so that each day, week and month has the proper number of _____ assigned.
11. Through the work order system _____ is documented and repair work is _____ and documented.
12. In the work request-work order system, once a work request is approved, it is placed in the _____.
13. What are the three main components of an inventory control system?
 - a. _____
 - b. _____
 - c. _____
14. The process of collecting and _____ data is an important component in developing _____ for the duties of the operator.
15. Data analysis is looking at the data and determining what can be _____.
16. The four types of reports commonly produced by an operator or manager are:
 - a. _____
 - b. _____
 - c. _____
 - d. _____

Operations Management - Part I – Worksheet & ANSWERS

1. Operations refers to the everyday tasks of running a utility.
2. Maintenance can be classified into two types: preventative maintenance, and emergency maintenance.
3. A primary portion of the maintenance management (MM) system is focused on identifying and scheduling operations tasks and maintenance.
4. The MM system is one of the most effective methods of determining the level of service that the utility can afford to deliver.
5. List at least two roadblocks to the development of a MM plan:
requires time, effort, and expertise; might require change in attitude; requires increased accountability; lack of technical background; requires increased organization and updating.
6. What are the six components of a maintenance management system?
 - a. operations and preventative maintenance plan
 - b. work order system
 - c. consumable and spare parts inventory system
 - d. data collection and reporting
 - e. contingency (or emergency) plan
 - f. renewal and replacement schedule
7. An effective maintenance management system must be based on a maintenance management policy developed by the manager and operator and approved by the policy making body.
8. The heart of the MM System is the operations and preventive maintenance plan.

Operations Management I & II

9. Reviewing O & M manuals, sampling requirements, renewal and replacement schedule, and safety program requirements are all ways to identify the work load.
10. Leveling the work load means adjusting (or moving) tasks so that each day, week and month has the proper number of work hours assigned.
11. Through the work order system consumable inventory use is documented and repair work is authorized and documented.
12. In the work request-work order system, once a work request is approved, it is placed in the back-log.
13. What are the three main components of an inventory control system?
 - a. identification of needed inventory
 - b. method of recording inventory
 - c. method for controlling inventory
14. The process of collecting and reporting data is an important component in developing accountability for the duties of the operator.
15. Data analysis is looking at the data and determining what can be learned.
16. The four types of reports commonly produced by an operator or manager are:
 - a. productivity reports
 - b. operations reports
 - c. regulatory agency reports
 - d. management reports

Operations Management - Part II — Worksheet

1. It is the responsibility of the _____ to oversee utility assets to ensure that they last their _____ .
2. An asset inventory control system can be useful in determining or providing: (list at least three things)
_____ .
3. What are the four components of an asset inventory control system?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
4. Knowing the life expectancy of a piece of equipment is useful in developing _____ plans.
5. What is used to determine if a piece of equipment should be placed in the R & R plan or the capital replacement plan? _____
6. A _____ plan is another name for an emergency response plan.
7. What are the first two steps in developing an emergency response plan?
 - a. _____
 - b. _____
8. Time is one of the five _____ a manager needs to manage.
9. We cannot control time, but we can control some _____ .
10. Important activities are those that _____ .

Operations Management I & II

11. What are three strategies for protecting your time?

12. A computer system has three basic components:

- a. _____
- b. _____
- c. _____

13. A _____ is a category of software used to manipulate numbers in a ledger style.

14. A _____ allows the computer to be used much like a typewriter.

15. When handling large lists of information on a computer, a _____ is considered to be the best category of software.

16. List three drawbacks that must be considered along with computers:

Operations Management - Part II — Worksheet

1. It is the responsibility of the utility manager to oversee utility assets to ensure that they last their expected life.
2. An asset inventory control system can be useful in determining or providing: (list at least three things)
The value of assets; Preventive maintenance requirements; Spare parts requirements; The capital replacement schedule; The data needed by future design engineers.
3. What are the four components of an asset inventory control system?
 - a. An asset-identification numbering system
 - b. A physical list of the assets
 - c. Description, value, and life expectancy of each asset
 - d. A method of updating the system
4. Knowing the life expectancy of a piece of equipment is useful in developing equipment replacement plans.
5. What is used to determine if a piece of equipment should be placed in the R & R plan or the capital replacement plan? under 10 yrs expected life =R&R; over 10 yrs=capital
6. A contingency plan is another name for an emergency response plan.
7. What are the first two steps in developing an emergency response plan?
 - a. list possible adverse situations
 - b. speculate about how they would affect the utility
8. Time is one of the five resources a manager needs to manage.
9. We cannot control time, but we can control some events.
10. Important activities are those that get results.

Operations Management I & II

11. What are three strategies for protecting your time?
 - a. arrange office to eliminate unnecessary eye contact
 - b. set aside dedicated time to meet with customers
 - c. assign staff to answer the phone
12. A computer system has three basic components:
 - a. hardware
 - b. operating system
 - c. application software
13. A spreadsheet is a category of software used to manipulate numbers in a ledger style.
14. A word processor allows the computer to be used much like a typewriter.
15. When handling large lists of information on a computer, a data base program is considered to be the best category of software.
16. List three drawbacks that must be considered along with computers:
 - a. require training for staff to be able to use
 - b. require money to repair and upgrade
 - c. data is vulnerable if not properly backed up

Financial Management I & II

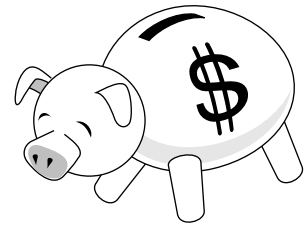
Key concepts to learn

Part I

- The purpose of financial management
- The financial management process
- Who is responsible for various financial management functions
- The purpose of a management information system
- The fund accounting process
- The basic systems that make up an accounting system
- The budgeting process

Part II

- The use of financial reports in managing a utility
- The rate setting process
- The collections process
- How to protect the utility through risk management
- Use of financial audits



Key terms to know

Part I

- Accounting
- Accounts Receivable
- Chart of Accounts
- Equity
- Fund Accounting
- Purchase Order
- Trust
- Accounts Payable
- Capital Project
- Depreciation
- Financial Reports
- Management Reports
- Revenue

Part II

- Capacity Demand Charges
- CPA
- Customer Account Charges
- Facility Charges
- Financial Reports
- Management Reports
- Utility Charges
- Usage Charges

Financial Management I & II

Presentation Sequence — Part I

Introduction :10

overheads 1-5 Financial management is a challenging topic for many students. Make sure everyone is getting this overview information before going on to the more detailed explanations.

Accounting :30

overheads 6-10 An overview of accounting, what it does for you, what makes an effective system plus what is fund accounting and enterprise accounting and why are they used.

overheads 11-18 Here are the nuts and bolts of an accounting system. Some students may use something that looks close to this, some may see little similarity at all to what they use. A good tool at this point is to tie the various systems in use together and see how they all (hopefully) have the same basic components, even if the names are different. If some components are missing from what students are using, it is a good opportunity to explain why each part is needed.

Budgeting :20

overheads 19-25 Again, there are many ways to come up with a budget, some good, some not so good. State that you are teaching a proven method that has advantages, but it is not the only system that works. Each utility must decide what will work best for them, not just what someone said to use, nor merely what is the easiest, or “what we’ve always done.”

Exercises 1:40

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Wrap-up & Homework

The students should have already read ahead through the last remaining chapter, *Financial Management II* by this time if you are following the sample schedule in the front of this book.

(See exercise notes after Part II presentation notes)

Presentation Sequence — Part II

Introduction, financial reports :15

overheads 1-2 Since several types of reports have been discussed in several chapters of this course, sometimes with similar names, there probably is some confusion. Stress that the particular reports in this course are merely examples, and its best to understand reports by their function, not so much their name: what information is presented and for what purpose?

Rate setting :30

overheads 3-7 You might first have to dispel the notions of crystal balls and smoke and mirrors when mentioning rate setting. Overheads 3 and 4 are perhaps the most important for they set down the principles that should guide a utility when it sets its rates. Without guiding principles, it can be seen as a system of smoke and mirrors. The remaining material gives one rate setting method.

Collections :20

overheads 8-9 Collections is not a fun topic for anyone, so some managers put it off...and put it off... Here is a chance to convince them that it needs to be done. It is unfair to the other customers to not take collections seriously. Besides the text and overheads, there is an exercise that deals with collections.

Risk Management, audits :20

overheads 10-12 The risk management section is intended to show that there are several ways to deal with risks facing a utility. We don't need to be victims of circumstances nor automatically purchase expensive insurance for every situation. Financial audits are akin to risk management. They are an up front cost to intended avoid a possible much higher cost or liability later. Sounds like insurance!

Exercises 1:40

Carefully choose the exercises that will make the most impact in the time available and insert them into the appropriate places in the lesson sequence.

Worksheets and Action Items :20

Handle any lingering questions or loose ends, then give the students time to do or finish their worksheets. After completing the worksheet, each student should write notes in the action items area at the end of the lesson. These notes are ideas that might need more study or implementation at their utility. They may need to skim over the lesson and any notes that were taken. These action items will be refined later.

Financial Management I & II

Conclusion & Review of course :30

Now is your chance to tie the various parts of the course together and make real and practical enough to take home and use. Go over the important points of all the material, stressing again anything you feel did not sink in well the first time. Make it participatory...have the students help you. It will keep them on their toes to the end and help them see how much they've learned.

Post Test :45

When all the learning is done (for the moment) give the post test and collect it. If its possible for one of the instructors to start tabulating immediately, the results might be ready before the course is out.

Action Plans :20

Have the students go over the action notes they took at the end of each lesson and compile a short list of items they wish to put into action or at least learn more about. They may not have a lot of direct actions at this point, since the course was designed mainly to raise awareness and set the groundwork for future courses. However, the time spent taking the course will have been wasted if it is viewed as purely academic and nothing changes. Make sure any direct action items are appropriate and attainable based on the manager's knowledge level.

Wrap up :20

It is recommended that the instructors give some kind of fun completion awards to the students to keep the atmosphere light and supportive. Also pass out the list of students' and instructors' contact information so all can keep in touch.

Exercise Notes

Exercise 1 :45

We All Budget

Something familiar can bridge the gap to something not so familiar. The students should begin to see that these management concepts, even financial ones, deal a lot with common sense.

Exercise 2 :45

Seal Bay Budget

Some problems with this budget are more obvious than others, but students with little experience may still draw a blank. Encourage them to read the budget top to bottom making a note every time they get to an item that brings up a question. Some of those questions may be from their own inexperience, but some of them came about because of the problems in this budget.

Exercise 3 1:00-2:00 Whale Cove Financial Reports

This exercise will take some time and concentration from the students. Handing out some of the documents the day before, or earlier the same day will give them a chance to study them. Tell them what to look for and recommend that they take good notes.

Exercise 4 :20-:30

Lets Be Fair About This

This is a good one to spring when things seem to get too boring or predictable. It is usually used right before or after the lesson on rate setting. It has good applicability to public relations too. Since it is short, there is no reason not to repeat it. The students will be familiar with it, but it is interesting to watch two different individuals try it. Some important discussion can follow the activity.

Exercise 5 1:00

Collections

This is such a vital and relevant topic it deserves some time and care to see that everyone is learning some valuable lessons. After going over the answers, if there is time you can ask for a couple cases the students have faced, and see if the group can apply some of the concepts.

Exercise 6 :30

Budgeting for Reserves

Through simple rules and simple arithmetic, students should be able to calculate the amount of money recommended to be set aside in reserves for equipment replacement. Discuss with the class that the examples and procedures here are simplified but do show the basic idea. Not taken into account is interest the reserves could be earning. However much of this interest will be eaten up by the likely higher costs of the replacement equipment.

This exercise may also work well earlier in the course, such as in the O & M lessons. The Budget Busters exercise below makes use of this information

Exercise 7 :30

Budget Busters

If a utility is run by the principals of this course, it can withstand many situations that would otherwise deal a hard blow to a budget or cause sudden rate increases. Some of the events listed should have no impact on short term budgeting or rates since reserves have been stored away or contingency plans made, or they are out of the utility's responsibility. Some of the events will necessitate a course change.

Exercise 8 :25

Points to Ponder

As with the other discussion question exercises, use these as a group exercise or interspersed through the lesson.

Exercise 1

WE ALL BUDGET

Purpose	Point out that we all budget even if we don't think we do.
Type of Activity	This activity is designed as a small group exercise. It can be used before or after the lecture on budgeting.
Time Requirement	0:45
Resources Needed	<ul style="list-style-type: none">• One copy of the "We All Budget" exercise sheet for each student• Chart pack with blank pages• One set of chart pack pens
Background	The budgeting process seems like a foreign concept to many who rural Alaskans. This exercise is used to point out that the concept is not as foreign as most of us think.
Activity	<ol style="list-style-type: none">1. Divide the participants into groups of 4 to 6.2. Provide each individual with a copy of the "We All Budget" worksheet.3. Have the participants list the type of food that is usually gathered. For your help a list of common subsistence foods is provided.4. Have each individual complete the estimates and then have the group agree on a set of estimates. They will first have to agree on the size of an average household. All sheets in the group must end up with the same numbers in the "Group Estimate" column.5. Collect one sheet from each group. Send the class on a break and transfer the information to a chart pack.6. Reconvene the class and compare the results. Usually there is a difference in the groups results, especially if women are in the groups (they know more about the amount it takes to feed the family). <p>Discuss how all results are correct, just different. Discuss how different items are collected at different times of the year (cash flow).</p> <p>Point out that they all use the budget concept in their daily lives and that financial budgeting is no different than what they normally do.</p>

We All Budget – form

Group name or number _____.

What is the size of the average household? _____ people.

How much subsistence food does it take to feed the average household?

Food	Your estimate	Group's estimate
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Some popular subsistence foods:

Moose	caribou	deer
musk-ox	bear	seal
walrus	whale	salmon
halibut	herring (strings)	whitefish/sheefish
ducks/birds	berries (gallons)	greens

Exercise 2

SEAL BAY UTILITY BUDGET

Purpose

Provide insight into reviewing a budget for a small community.

Format

small group

Time Requirement

:45

Resources Needed

- One copy of the Seal Bay Utility Budget for each student
- One copy of the Seal Bay Utility Budget Answer sheets for each student.

Background

Managers must be able to prepare budgets in a manner that reflect the true income and expense of the organization. This small budget reflects the income and expense for a small utility.

Activity

1. Hand out a copy of the Seal Bay Utility Budget.
2. Direct the groups to review the budget, note any questions they have and draw some conclusions.
3. After the discussion has subsided hand out the answer sheets—analysis and amended budget.
4. Give them a few minutes to review the sheets and then open the floor to discussion. In the past this exercise has been most beneficial in generating a good discussion.
5. Conclude by asking for ideas; what could be done to improve the budget?

SEAL BAY UTILITY BUDGET — Current**REVENUES**

USER FEES	44,000.00
NEW HOOK-UP FEES	10,000.00
ENTERPRISE REVENUES	5,000.00
WASHETERIA REVENUE	40,000.00
INTEREST ON INVESTMENTS	500.00

TOTAL OPERATING REVENUE **\$99,500.00**

UTILITY IMPROVEMENT GRANT	100,000.00
ANHB PILOT PROJECT	40,000.00
BULK FUEL LOAN	30,000.00

TOTAL REVENUE **\$269,500.00**

EXPENDITURES

OPERATOR SALARY	34,000.00
ALTERNATE OPERATOR	18,000.00
WASHETERIA ATTENDANTS	36,000.00
ELECTRICITY	14,000.00
HEATING FUEL	12,000.00
FUEL DEPOT	40,000.00
GARBAGE PICK-UP	1,000.00
WATER TESTING	1,800.00
ANHB PILOT PROJECT EXPENSES	20,000.00
UTILITY IMPROVEMENT EXPENSES	65,000.00
INSURANCE	12,000.00
PAYROLL TAXES	8,900.00
PARTS & SUPPLIES	12,500.00
TELEPHONE	800.00

TOTAL EXPENDITURES **\$276,000.00**

SEAL BAY UTILITY BUDGET – Analysis

SEAL BAY UTILITY BUDGET		
REVENUES		
<div>No detail. Other enterprise revenue shouldn't be commingled with the utility fund.</div>	USER FEES	44,000.00
	NEW HOOK-UP FEES	10,000.00
	ENTERPRISE REVENUES	5,000.00
	WASHETERIA REVENUE	40,000.00
	INTEREST ON INVESTMENTS	500.00
TOTAL OPERATING REVENUE		\$ 99,500.00
	UTILITY IMPROVEMENT GRANT	100,000.00
	ANHB PILOT PROJECT	40,000.00
	BULK FUEL LOAN	30,000.00
TOTAL REVENUE		\$ 269,500.00
EXPENDITURES		
<div>This overhead cost should be allocated to _____?</div>	OPERATOR SALARY	34,000.00
	ALTERNATE OPERATOR	18,000.00
	WASHETERIA ATTENDANTS	36,000.00
	ELECTRICITY	14,000.00
	HEATING FUEL	12,000.00
	FUEL DEPOT	40,000.00
	GARBAGE PICK-UP	1,000.00
	WATER TESTING	1,800.00
	ANHB PILOT PROJECT EXPENSES	20,000.00
	UTILITY IMPROVEMENT EXPENSES	65,000.00
	INSURANCE	12,000.00
	PAYROLL TAXES	8,900.00
	PARTS & SUPPLIES	12,500.00
	TELEPHONE	800.00
TOTAL EXPENSE		\$276,000.00

Are these grants properly re-capped in expenditures? Should they be included in the enterprise operating budget?

This is NOT a grant but payback of the loan is not identified as an expense.

Do operating expenses exceed operating revenues? By how much?

SEAL BAY UTILITY BUDGET – Amended

SEAL BAY UTILITY BUDGET		
REVENUES		
User Fees		70,000.00
New Hook-up Fees		10,000.00
Washeteria Revenue		40,000.00
Bulk Fuel Loan		12,000.00
TOTAL OPERATING REVENUE	\$	132,000.00
EXPENDITURES		
Operator Salary		34,000.00
Alternate Operator		18,000.00
Washeteria Attendants		18,000.00
Electricity		14,000.00
Heating Fuel		12,000.00
Water Testing		1,800.00
Insurance		6,000.00
Payroll Taxes		10,500.00
Parts & Supplies		12,500.00
Telephone		800.00
Equipment Replacement Fund		4,400.00
TOTAL EXPENSE		\$132,000.00

Exercise 3

WHALE COVE FINANCIAL REPORTS

Purpose

Provide an overview of the relationship between annual operating plans, operating budgets, financial reports and monthly operator/manager reports.

Format

small group (4 to 6 participants)

Time Required

1:00-2:00

Resources Needed

- Copy of the Community Profile
- Copy of the annual operating plan
- Copy of the annual operating budget
- Copy of the February financial statement
- Copy of the Operation/Management report
- Answer Key

Background

It is common practice to view the operating plan, budget and monthly financial statement as independent items. This exercise is designed to help develop an awareness between the key documents.

In this exercise the participants take on the role of the policy making body and the instructor takes on the role of utility manager.

If you decide to use this exercise it is suggested that you hand out the annual operations plan during the planning session to give the participants time to study the plan. In addition, the budget could be handed out the day before the exercise.

Activity

1. Divide the participants into teams of 4 to 6. Instruct them that they will be taking on the role of the policy making body and you will be taking on the role of utility manager.
2. Hand out the community profile and annual operating plan. Instruct the participants to study these documents. (It is best to give the team overnight to study these documents). Instruct the teams that they can seek information from you but only when all participants are assembled (open meeting law requirements). It is best to hand out these documents after the planning lesson has been completed.
3. Hand out the utility budget. Instruct the teams to study this document and compare it to the annual operating plan. You may want to hand this document out the day before the discussion on budgets so that the team members have time to study it.
4. Place the participants into a team and ask them to discuss the documents. Look for what is right and for any discrepancies.
5. After they have had time to discuss the documents as a team, begin class discussion. Here are the key discrepancies in these documents:
 - The annual operating report indicates an increase in the number of hauls due to adding six more houses. However, the level of service and the budget both reflect the same number of hauls as last year.
 - The biggest problem is the lack of detail in the budget to support the annual operating plan. This is a typical problem and is the reason we recommend the bottom up budgeting method. With this method a detailed budget would be developed and this single page document would be the summary presented to the policy making body.

- There is no support for the increase in washeteria income in the operating report.
 - Increased income and cost between 93-94 and 94-95 is due to the addition of the haul system.
 - The participants may have many other questions such as operator rate of pay, etc.
6. Hand out the financial report and the operation/management report. Instruct the team to review and discuss these documents.
7. Once the team discussion has dropped off, open the floor to full-class discussion. What problems did they see? Here are a few key issues:
- There was not enough money transferred to reserves. The total income from hauls has been $\$1,851 + \$7,792 = \$9,643$. This is equivalent to 65 water hauls and 332 sewage hauls. ($\$1,851 \div \$28.47 = 65$ and $\$7,792 \div \$23.47 = 332$) This is an average of 49.6 hauls per month. If we assume that the ATV could have been used from July through October and the snow machine used from November through February then the transfers to reserves should have been:
 $49.6 \text{ hauls} \times 4 \text{ months} \times \$3.22 = \$638.85$
 $49.6 \text{ hauls} \times 4 \text{ months} \times \$4.50 = \$892.80$ for a total of $\$1,531.65$
 - The income at the washeteria appears to be low. $\$13,600 \div 12 = \$1,133$ per month $\times 8 \text{ months} = \$9,066$
 - The personnel services at the washeteria appear to be low. $\$3,500 \div 12 = \292 / month $\times 8 = \$2,336$. Is the low income due to the lack of an attendant? Is the washeteria closed part of the time when it should be open? etc.
 - The annual operating plan said that the operator was to be trained in electrical maintenance and ATV/snow machine maintenance - no funds have been spent to date on this training.
 - Notice that the monthly report says there are 34 houses connected. The budget was based on 28 houses.
 - There is no support to show how the manager calculated the cost per gallons to produce water.
 - The budget appears inadequate in operating expense for the electrical and fuel consumption requirements.
 - The report says there were 39 sewage hauls. However, the financial report only shows enough income for 35. ($\$812 \div 23.47 = 35$)

WHALE COVE FINANCIAL REPORTS

Community Profile

This is a small community with a population of 177 people living in 48 homes. 28 of these homes are part of a new sewage and water haul system.

The water system is a fill and draw type (using a 125,000 gallon tank) and uses a surface water source with pressure filters and chlorine for disinfection. The finished water is high in color and contains a chlorine smell.

Water is piped to the school, washeteria, city hall and community building. The utility provides only about ninety 100 gallon hauls of water a year. The remainder of the community either packs water from the washeteria or from the river three to five miles upstream from the community. Approximately 85% of all domestic water is packed from the river by individuals.

Sewage is hauled to a lagoon for disposal.

Estimated annual water use

- Haul - 9,000 gallons
- Direct sales - 9,000 gallons
- School - 229,500 gallons
- City hall and community center - 11,520 gallons
- Washeteria - 150,000 gallons

Total for the year 409,020 gallons

Average daily use 1,120 gallons

WHALE COVE FINANCIAL REPORTS

Whale Cove Washeteria - Water & Sewer Utility Annual Operating Plan 1995 - 96

SYSTEM CONDITIONS

The water system is in good repair. Last year 85% of all scheduled PM was completed. Water quality met the SDWA requirements. The intake and pump are 12 years old with a life expectancy of 15 to 20 years. The storage tank is expected to last another 15 years.

The wastewater system upgrade was completed last year with the addition of six new homes on the haul system bringing the total to 28 homes. There are 22 homes using individual honey buckets. All new equipment has been placed on a replacement schedule.

GOALS

The next fiscal year the Whale Cove Water and Sewer Utility will achieve the following goals:

- Meet customer expectations for adequacy and reliability
- Perform 85% of all scheduled maintenance on the water and wastewater systems
- Have no loss time due to accidents
- Improve the water system electrical system reliability by increasing the operator skills through training
- Improve the winter haul system vehicle reliability by increasing the operator's maintenance skills through training
- Reduce past due accounts receivable to less than 5% of the annual billings. Past due accounts receivable should not exceed \$500
- Bring capital and major scheduled repair projects in on time and under budget

LEVEL OF SERVICE

During the next fiscal year the Whale Cove Water & Sewer Utility will provide the following level of service:

- Provide drinking water to 48 households
- Make 415 sewage hauls
- Make 90 water hauls
- Provide 12 hour per day, 7-day per week service at the washeteria
- Service one commercial customer - the school
- Service two public customers - city hall and community center
- Staff the utility office 6 hours a day 4 days a week
- Provide a utility operator on-call 24 hours a day 365 days a year
- Mail bills for piped water service on or before the 10th of each month
- Mail bills for haul service within 3-days of the service

COMPLIANCE

The Whale Cove Water and Sewer Utility is obligated to meet the requirements of the DEC, DOL and IRS. This will be accomplished in the following manner:

- The SDWA non-routine sampling and testing requirements will be met by scheduling and collecting the appropriate samples. The samples will be shipped to the Northern Testing Laboratory for analysis. The results will be sent to the DEC within ten days of the receipt of the results.
- The SDWA routine sampling and testing requirements will be met by scheduling, collecting and testing pH, turbidity, chlorine residuals, system pressures at appropriate locations. The results of these tests will be posted on a monthly report that is sent to DEC on or before the tenth day of each month.
- Compliance with the DOL requirements will be met by performing evaluations of all eight of the utility safety programs. Refresher training will be conducted for all eight of these programs. The refresher training will consist of two and four hour sessions. In addition, a general safety inspection of the Utility facilities will be conducted in November. The results of this inspection will be used to make improvements in the safety program. All safety incidents and accidents will be posted on the OSHA 200 form and sent to OSHA at the end of the year.
- The IRS and DOL payroll tax requirements will be met by paying all withholding taxes by the tenth of each month for the previous months payroll.

QUANTITY

During the next fiscal year the utility expects to treat 410,000 gallons of water at a cost of \$0.05 per gallon. The utility expects to make ninety 100 gallon water deliveries at a cost of \$28.47 per haul.

During the next fiscal year the utility expects to make 415 sewage collection and hauls from individual homes at a cost of \$23.47 per haul.

EXPECTED CHANGES IN QUANTITY OF SERVICE

During the next fiscal year the utility expects to add six (6) homes to the haul system. The average number of hauls per home is presently 14.8 per year. It is estimated that these new homes will increase the total number of hauls by 89, from 415 to 504.

UTILITY SALES

During the next fiscal year the Whale Cove Water & Sewer Utility expects to bill the following:

- | | |
|------------------------|-------------|
| • 415 sewage hauls | \$9,740.00 |
| • 90 water hauls | \$2,562.00 |
| • Industrial customers | \$11,475.00 |
| • Public customers | \$576.00 |
| • Washeteria | \$13,600.00 |
| • Customer Fees | \$165.00 |

CASH RESOURCES

A grant for \$25,000 to install an additional six flush haul systems. The utility must put up a 10% match of \$2,500.00.

LABOR

During the next fiscal year the Whale Cove Water & Sewer Utility expects the following labor requirements:

- Salary and wages \$18,757.00
- Payroll taxes \$2,292.00
- Workers comp \$991.00
- Benefits (vacation, leave, medical) \$0.00

Total Labor cost \$22,040.00

The following is a breakdown of the expected labor hours by major category for the year:

- Treatment - 421 hrs
- Distribution and Collection - 421 hrs
- Washeteria O&M - 212 hrs
- Administration - 449 hrs
- Training & Safety - 50 hrs

MATERIALS

There are no expected increase or decrease in materials, chemicals, contract labor or professional services for the upcoming year. The cost of materials for the year is estimated at \$1,408.00

CAPITAL & SPECIAL PROJECTS

Capital Projects

Using the \$80,000 from PHS. The utility will install household flush haul systems in six homes. This project will be completed using force account.

Using \$1,500 from reserves the utility will install two new washing machines.

R & R

The ATV and snow machine used for the haul system are now one year old. They have a life expectancy of 4 years. In order to replace these annual amount that should be placed in the reserves are \$1,625.00 for the ATV and \$2,275.00 for the snow machine. Based on 515 hauls per year this is equivalent to \$3.22 per haul for the ATV and \$4.50 per haul for the snow machine.

Once each month the per haul amount is multiplied by the number of hauls and that amount transferred to reserves.

WHALE COVE FINANCIAL REPORTS — Monthly Reports

Washeteria - Water & Sewer Utility Monthly Operations/Management Report

Month of February

Prepared by John Craig &
Pat Simpson

Customers

Presently serving 34 homes on the haul system

Water System

Water Consumption 27,000 gal Max day 1800 gal Min day 660 gal Avg day 965 gal

Last month 26,000 gal 3.8 % Increase Last Year 24,000gal 12.5 % Increase

Water Hauls - 7 at 100 gallons each

Comments on Consumption

Increase is due to cold weather causing greater use of washeteria

Power Consumption

this month 259 KWH
rate \$0.22 per KWH

last month 201 KWH
electric cost \$56.98

Chemical use

2 lbs of chlorine

Cost per gallon \$0.048 - Last month \$0.044

Increased cost due to use of boilers to heat the water

Water Quality

Chlorine residual averaged 0.4 mg/L - Low was 0.1 mg/L and high of 1.2 mg/L

Bac-T results were negative

There were 10 customer complaints about chlorine odor and 12 complaints about color

Wastewater System

Wastewater Hauls 39

Labor

Production/Treatment 36 Hrs

Collection/Distribution 36 Hrs

Washeteria 24 Hrs

Labor cost \$1159.00

WHALE COVE FINANCIAL REPORTS — ANSWER KEY

ANNUAL OPERATING PLAN & BUDGET

- The annual operating plan indicates an increase in the number of hauls due to adding six more houses. However, the level of service and the budget both reflect the same number of hauls as last year.
- The biggest problem is the lack of detail in the budget to support the annual operating plan. This is a typical problem and is the reason we recommend the bottom up budgeting method. With this method a detailed budget would be developed and this single page document would be the summary presented to the policy making body.
- There is no support for the increase in washeteria income in the operating report.
- Increased income and cost between 93-94 and 94-95 is due to the addition of the haul system.

FINANCIAL REPORT AND MONTHLY OPERATIONS/MANAGEMENT REPORT

- There was not enough money transferred to reserves. The total income from hauls has been $\$1,851 + \$7,792 = \$9,643$. This is equivalent to 65 water hauls and 332 sewage hauls. ($\$1,851 \div \$28.47 = 65$ and $\$7,792 \div \$23.47 = 332$) This is a total of 397 hauls or $397 \div 8 \text{ months} = 49.6$ hauls per month. If we assume that the ATV could have been used from July through October and the snow machine used from November through February then the transfers to reserves should have been:
 $49.6 \text{ hauls} \times 4 \text{ months} \times \$3.22 = \$638.85$
 $49.6 \text{ hauls} \times 4 \text{ months} \times \$4.50 = \$892.80$ for a total of $\$1,531.65$.
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- The annual operating plan said that the operator was to be trained in electrical maintenance and ATV/snow machine maintenance - no funds have been spent to date on this item.
- Notice that the monthly report says there are 34 houses connected. The budget was based on 28 houses.
- There is not support to show how the manager calculated the cost per gallons to produce water.
- The budget appears in adequate is operating expense for the electrical and fuel consumption requirements.
- The report says there were 39 sewage hauls. However, the financial report only shows enough income for 35. ($\$812 \div 23.47 = 35$)

Exercise 4

LET'S BE FAIR ABOUT THIS

Purpose

Stress the importance of perceptions of equity and fairness in any contact or negotiation between individuals.

Format

This activity is designed as a role play between two individuals. It is designed to be used either before or after the section on rate setting.

Time Requirement

:20-:30

Resources Needed

The following resources should be gathered prior to the start of this activity:

- A substantial supply of a tangible and mutually desirable item. This may be \$100 in (play) money, 100 jelly beans or M&M's, etc.

Background

The objective of this exercise is to stress the importance of perceptions of equity and fairness in any contact or negotiation between individuals. The two key elements, in utility rates, are they must be fair and equitable.

Activity

Follow these steps:

1. Identify two participants to role play an interaction.
2. Visibly provide individual "A" with a supply of goods to distribute to (share with) individual "B." This may be \$100 in (play) money, 100 jelly beans or M&M's, etc.
3. Instruct individual "A" that she/he is to make an offer to split the resource with individual "B" in any proportion desired.

Individual "B" may only accept or reject the offer, but not negotiate the split. If "B" accepts the offer, a deal is made. If "B" rejects the offer, *neither* party receives any of the items.
4. Inform Individual "B" that "A" has 100 of the resource items to be shared between them. "B" can accept or reject the single offer to be made, but may not provide any input into "A's" determination of the offer, nor may a counteroffer be made. If "B" rejects the offer, neither party keeps any of the proceeds.
5. Proceed with the interaction.

Key Points

"A" often is tempted to offer a split that will be personally favorable, such as 60-40, or 80-20. From a rational perspective, B should accept any offer from "A" since "B" will be better off with anything (even 1) than previously. But since people don't like to be exploited, many "B's" will reject offers that don't seem fair (as perceived by them).

Similarly, "A" could decide to offer any split (even 1-99), since that would make "A" better off than previously. The key to making a deal of this kind—even when in a power position—is not only to convince the other party that they will gain a lot over their previous condition, but also to create an image of fairness, wherein "B" is convinced that A won't be gaining a lot more than "B." Negotiators may need to understand that even when it is possible to "make a killing" on a single deal, it may be wiser to build a longer term relationship by offering a fair deal.

This requires, of course, either empathizing sufficiently to infer what is fair, or inquiring of the other party what would be a fair resolution to the situation.

Exercise 5

COLLECTIONS

Purpose

To get the students to apply different collection strategies to different situations. small groups.

Type of Activity**Time Requirement**

1:00

Resources Needed

Case study questions

Chart pack to compile answers on.

Background

Communities will usually have one or two collection strategies that they apply in all situations. Some strategies will work better in situations than others. This exercise is to try and get managers thinking about how to apply different strategies.

Instructions

1. Have the students assemble in their small groups. Hand out the exercise.
2. There are four situations to the exercise. You can either have each group deal with all four situations or assign situations to the different groups.
3. Allow 30 minutes for the groups to form their answers.
4. Have each group report what they decided for each question or questions. Write the answers for each question on the chart pack page.
5. Pass out the answer sheet.

There are no “wrong” answers to this exercise. There are many ways to collect past due amounts. The emphasis should be that the utility needs to decide which is most appropriate/acceptable in their community, and give different circumstances.

This is a good place to discuss how having written procedures (ordinances) and user agreements can help in the collection process.

COLLECTION CASE STUDIES — Situations

SITUATION 1

The Utility has a piped water/sewer system, The water system is a circulating loop system. When the original system was put in, no shut-off valves were installed for residential lines. Ten years later when the system was expanded, shut-off valves were installed on the new installations only. None of the residential customers have meters.

Several of the customers are past due in paying their bills. A couple of the past due customers had shut-off valves, and the utility used them to turn off service. One of these customers complained that the utility cannot shut him off because “they aren’t turning everyone who isn’t paying off” and it Isn’t fair.

What can the Utility do?

Are there any steps that the utility needs to do before implementing these strategies?

SITUATION 2

An apartment building with 4 units is connected to the water/sewer system. Currently the utility sends a bill to the occupant of each unit. Only two of the occupants are paying their bills. There is only one shut-off valve for the whole building.

What can be done to increase collections?

Are there any steps that the Utility needs to do before implementing these strategies?

SITUATION 3

Joe ran up a big utility bill then moved out of the community. You know where he moved and have his address and phone number. Both Joe's parents and sister still live in your community and are utility customers.

What can be done to recover the past due amount that Joe owes?

SITUATION 4

The Utility has had a high turnover in clerks. Not all the clerks were trained properly in billing and keeping good records. Because of the clerk turnover, customers were not always billed for services and/or their accounts were not credited properly for payments. The council has hired a new clerk and has decided to get tough on past due accounts. With the latest billing, the clerk sent out a letter explaining the collections efforts that the council was going to take for past due accounts. Quite a few of the customers have been coming in saying their account balance is wrong and they aren't going to pay it.

What steps should be taken to recover the past due amounts?

COLLECTION CASE STUDIES — ANSWERS

SITUATION 1

The Utility has a piped water/sewer system, The water system is a circulating loop system. When the original system was put in, no shut-off valves were installed for residential lines. Ten years later when the system was expanded, shut-off valves were installed on the new installations only. None of the residential customers have meters.

Several of the customers are past due in paying their bills. A couple of the past due customers had shut-off valves, and the utility used them to turn off service. One of these customers complained that the utility cannot shut him off because “they aren’t turning everyone who isn’t paying off” and it Isn’t fair.

What can the Utility do?

It would be better to find a collection strategy to use on those without shut-off valves than to give up one that works on those with them.

The utility can cut off those without shut-off valves by digging up the line and cutting it off, making sure that they know that to be reconnected, they will have to pay labor costs of both the “disconnection” and for reconnection. That way all non-paying customers can be cut off. (A meter can be installed while the line is dug up, meaning one fewer non-metered customer).

Many of the negative strategies could work against the customers without valves. The utility needs to pursue them so that those customers with valves see the utility is trying to collect from all past due customers.

Are there any steps that the utility needs to do before implementing these strategies?

Make sure that all customers know the collection policy and what steps the utility will take to collect past due amounts. The utility should have a signed customer agreement for each customer.

SITUATION 2

An apartment building with 4 units is connected to the water/sewer system. Currently the utility sends a bill to the occupant of each unit. Only two of the occupants are paying their bills. There is only one shut-off valve for the whole building.

What can be done to increase collections?

Make the owner of the building pay for all 4 units each month, rather than bill each unit individually. The owner could then recover the cost through a rental increase.

Are there any steps that the Utility needs to do before implementing these strategies?

Handling of multiple residence units should be addressed in the utility ordinance.

SITUATION 3

Joe ran up a big utility bill then moved out of the community. You know where he moved and have his address and phone number. Both Joe's parents and sister still live in your community and are utility customers.

What could be done to recover the past due amount that Joe owes?

The utility can not go after Joe's parents or sister to recover the past due amounts.

Joe would be a good candidate for small claims court if the utility has the necessary backup information to file a claim.

Most of the negative strategies will not work because Joe no longer lives in the village.

SITUATION 4

The Utility has had a high turnover in clerks. Not all the clerks were trained properly in billing and keeping good records. Because of the clerk turnover, customers were not always billed for services and/or their accounts were not credited properly for payments. The council has hired a new clerk and has decided to get tough on past due accounts. With the latest billing, the clerk sent out a letter explaining the collections efforts that the council was going to take for past due accounts. Quite a few of the customers have been coming in saying their account balance is wrong and they aren't going to pay it.

What steps should be taken to recover the past due amounts?

The utility needs to take immediate action to "audit" its customer records. If it is found that they are unreliable, it will be best to go back as far as can be reliably done and start the customer accounts at that point. The utility will have to "write-off" any previous debt. Make: sure that written instructions are available, and, if necessary, modify the billing/record keeping system so that this will not happen again.

Financial Management I & II

Exercise 6

BUDGETING FOR RESERVES

- Time needed: 20–30 minutes
- Materials needed: calculators, flip chart, writing board, or overhead projector and the following table (can be put on overhead sheet)
- Format: Individually
- Instructions: Use the reserve budgeting guidelines below to complete the table
- By the time an asset's life expectancy is up, budget reserves should have accumulated the following amounts:
- assets with a life expectancy of up to 10 years: 100% of replacement value
 - assets with a life expectancy of over 10 years: 10% of replacement value

Item	life	value	% to save	on hand at end	reserve per year
water tank	40	\$350,000	_____	_____	_____
recirculation pumps	30	\$15,000	_____	_____	_____
pump motors	10	\$5,000	_____	_____	_____
electrical equipment	20	\$7,000	_____	_____	_____
pipng	30	\$9,000	_____	_____	_____
meters	10	\$1,500	_____	_____	_____
totals		\$387,500			_____

Key to columns:

life=	life expectancy of item
value=	replacement value of item
% to save=	% of value to save by the end of life expectancy
on hand at end=	total amount to have on hand by the end of life expectancy
reserve per year=	how much needs to be put aside each year to achieve the on hand amount

BUDGETING FOR RESERVES — Answers

Item	life	value	% to save	on hand at end	reserve per year
water tank	40	\$350,000	__10__	__35,000__	__875__
recirculation pumps	30	\$15,000	__10__	__1,500__	__50__
pump motors	10	\$5,000	__100__	__5,000__	__500__
electrical equipment	20	\$7,000	__10__	__700__	__35__
pipng	30	\$9,000	__10__	__900__	__30__
meters	10	\$1,500	__100__	__1,500__	__150__
totals		\$387,500			__1,640__

Exercise 7

BUDGET BUSTERS

Purpose

To explore how various plans, events and situations affect a utility's budget, rates, and cash flow.

Time needed

:30

Materials needed

flip chart, writing board, or overhead projector and blank sheet.

Format

Small groups. Can be done as a game as indicated, or simple group discussions with a full class review, as with many of the other discussion exercises.

Instructions

Divide the class into two or three teams (3-5 students per team). Each team is awarded \$500,000 in grant money, which is written under their team name on a flip chart or overhead etc. The following situations are then displayed on an overhead, read aloud or passed out, one at a time, to the entire class. Each group should consult among themselves and have a spokesman raise their hand when they have an answer. The first team to raise their hand gets the first shot at the answer.

If the answer is good, more money is added to the grant. If it misses the mark, money is taken away. The instructor must make a judgment on each answer and can award or deduct up to \$100,000—or zero—depending on the quality of the answer including the team's explanation of their answer. Team with the most in their pot at the end wins.

To each situation, the team must say what the effect would be on a *well-run* utility's rates and or budget, and why. The instructor can change the order of the questions to vary the subject matter among teams.

BUDGET BUSTERS — Situations

1. The EPA has announced a new water test to take effect next year. The mandatory test will cost \$6000 the first year and \$450 each year after.
2. The airport, which has a single restroom, wants to add full-service restrooms that will include toilets – two each for men and women – hot showers, and a small laundry. The cost is estimated to be \$45,000.
3. Whoops! Three of the seven meters you have on commercial customers have gone out in the last two months. You had been hoping that those meters would last another year or two but what can you expect from 15-year old meters that had a life expectancy of 10 years? The meters cost \$380 each plus about \$250 in labor to install.
4. The village council charges the utility an overhead charge of 5% of gross. Now they want 7.5%.
5. As utility superintendent you have done the job of both manger and operator for three years, putting in 50-60 hours a week on a salary of \$45,000 a year. Gladly, the board has split the position. You will be a 30 hour a week manager at \$30,000 and they will hire a 25 hour per week operator at \$15,000 per year.
6. Good news! You're going to get a new water tank to replace the 30-year old one. Funding for the \$400,000 expense is courtesy of ANTHC. The catch is, you will have to pony up \$25,000 as your part of the installation of the new tank.
7. The amount of fish waste at the fish processing plant is so great there has been a blockage immediately beneath the floor of the slime line. Cement has to be ripped up to get to the piping, a cost estimate of \$8,500.
8. The city wants to hire their own clerk and not share the utility clerk as they have been doing for 12 years (with the same person in the job). You were getting the better part of the deal and are going to need her almost full time just for utility duties. She is very much worth the \$15.75 an hour plus a benefit package of 22.5% she is used to.
9. With the new generator running smoothly, the cost of electrical power has been cut by 50%.
10. Zippty-Do-Dah Day Tours is building a new lodge on the site of the old cannery which already has a main line and service connection to it, but has not been used for 8 years. You can expect water and sewer demand on your 20-year-old systems to go up 8-10% when they open in a year and a half. They will only operate April 15-Sep 15.

Budget Busters — Answers

1. The EPA has announced a new water test to take effect next year. The mandatory test will cost \$6000 the first year and \$450 each year after.

[Answer: Most of the first year costs should be absorbed by emergency funds and then a small rate increase can be instituted to cover the subsequent years' costs plus pay back the emergency fund over a few years.]

2. The airport, which has a single restroom, wants to add full-service restrooms that will include toilets – two each for men and women – hot showers, and a small laundry. The cost is estimated to be \$45,000.

[Answer: The cost of installing the restrooms should lie solely with the airport. The utility will only be affected if the water or sewer usage goes up more than it can easily handle. A meter should be installed if it is not already, so any increase in water usage would bring increased revenue.]

3. Whoops! Three of the seven meters you have on commercial customers have gone out in the last two months. You had been hoping that those meters would last another year or two but what can you expect from 15-year old meters that had a life expectancy of 10 years? The meters cost \$380 each plus about \$250 in labor to install.

[Answer: Reserves for the replacement of the meters should be healthy since they out-lived their life expectancy. Replace them all as soon as possible since the others will probably fail soon. Budget and rates should be unaffected or possibly excess reserves could be freed up (with caution)]

4. The village council charges the utility an overhead charge of 5% of gross. Now they want 7.5%.

[Answer: They should not have been taking the 5% in the first place. Utility income is for the use of the utility alone. It should be fought.]

5. As utility superintendent you have done the job of both manger and operator for three years, putting in 50-60 hours a week on a salary of \$45,000 a year. Gladly, the board has split the position. You will be a 30 hour a week manager at \$30,000 and they will hire a 25 hour per week operator at \$15,000 per year.

[Answer: The salaries only tell part of the story. There will be a substantial budget drain due to fringe benefits going to two instead of one employee, plus training, paperwork, more leave time etc. Rates may have to increase but so should the level of service. The new blood may help find ways to cut other costs.]

6. Good news! You're going to get a new water tank to replace the 30-year old one. Funding for the \$400,000 expense is courtesy of ANTHC. The catch is, you will have to pony up \$25,000 as your part of the installation of the new tank.

[Answer: Reserves for the old tank should have been accruing at about \$1,000 per year so the village should actually have \$30,000 in cash for installing the new tank. Actually, they should have much more than that. If the money had been invested all this time in a money market account that averaged 10% interest, it would be about \$175,000! So the

\$25,000 could be easily absorbed by the reserve account and there would not have to be a rate increase. After careful examination, you could roll the excess reserves back into the budget and maybe *lower* rates.]

7. The amount of fish waste at the fish processing plant is so great there has been a blockage immediately beneath the floor of the slime line. Cement has to be ripped up to get to the piping, a cost estimate of \$8,500.

[Answer: This is the plant's problem, unless they somehow damage the sewer mains, in which case they will still eventually have to pay it, but may cause emergency work or expense on the utility's part]

8. The city wants to hire their own clerk and not share the utility clerk as they have been doing for 12 years (with the same person in the job). You were getting the better part of the deal and are going to need her almost full time just for utility duties. She is very much worth the \$15.75 an hour plus a benefit package of 22.5% she is used to.

[Answer: It would probably be wise to try to keep this employee and hire her full time, as it might be hard to replace her. An increase in the budget will have to be made soon, and probably a small rate increase]

9. With the new generator running smoothly, the cost of electrical power has been cut by 50%.

[Answer: This should give the budget a nice break. If all else is well, give the customers a break on rates.]

10. Zippty-Do-Dah Day Tours is building a new lodge on the site of the old cannery which already has a main line and service connection to it, but has not been used for 8 years. You can expect water and sewer demand on your 20-year-old systems to go up 8-10% when they open in a year and a half. They will only operate April 15-Sep 15.

[Answer: Your systems were handling the cannery when it was running, so they should be capable of handling the lodge. Since you have a year and a half, you can plan this expansion with virtually no impact on budget or rates. Plan for the expense of testing and possibly repairing or replacing the old connection and meter. Let the lodge know they will be footing this bill and give them the estimated amount, so they can plan too.]

Financial Management I & II

Exercise 8

POINTS TO PONDER

Purpose	To discuss how to handle various financial and management issues.
Time needed	0:20-0:30
Materials needed	Paper and pen for each group.
Format	Break into groups of 3-4, or simply discuss as a class
Instructions	Choose a spokesman/notetaker. Discuss the question(s) you are given. At the end of the allotted time, the spokesman will report to the class what the question was and what ideas you came up with.

1. Joe Jones has refused to pay for service when he is not in the village, which is six months out of the year.
2. Mary Wishbone has built a garage on the easement that runs across her property.
3. Steven Smith, the utility operator, has stood in for the utility manager at the last seven village council meetings.
4. The utility clerk, who is also the village clerk, is paying village, village corporation and village utility bills from the same checkbook.
5. The village council has just ordered that the new sewage lagoon be used even though no permits have been issued.
6. The utility board raised rates retroactively to pay for a new employee.
7. The village corporation is taking 5% of the utility income as a “management fee” for being the grantee for federal funds.

Financial Management I — Worksheet

1. List at least four authorizing documents that give a utility the authority to act:

2. Utility accounting is a cyclical process. Place the following accounting steps in proper order starting with the budgeting process.

- a. _____ Budgeting
- b. _____ Reporting
- c. _____ Analysis
- d. _____ Accounting
- e. _____ Rate setting

3. The receipt or payment of money is called a _____, the basic unit of accounting.
4. A utility should choose an accounting system that has a level of _____ that meets the needs of the utility, yet is _____.
5. The system of maintaining the individual transactions for each type of activity in separate accounting books is called _____ accounting.
6. The _____ of _____ is the component of the accounting system that allows us to place income and expenses into categories.
7. The categories in the chart of accounts must match the categories in the _____ exactly.
8. The authority for the customer billing and collection system is established in the _____ and detailed in the accounting _____ manual.

Financial Management I & II

9. The accounting system used to track money spent by the utility is called the _____ system.
10. What are the three steps in the payroll system?
- a. _____
 - b. _____
 - c. _____
11. If a utility is short of cash to pay all of the payroll and payroll taxes they should:
- _____ a. Pay all of the payroll and pay the taxes when they can
 - _____ b. Pay taxes first
 - _____ c. Pay a portion of the payroll and the proper amount of payroll taxes, then pay the remainder of the payroll and taxes later.
12. It is very difficult for a small utility to obtain funds to replace capital assets. However, it is desirable to put aside _____ of the value of these assets in order to pay for pre-engineering, planning costs and/or match for grants.
13. Money to place in the reserve funds comes from _____
14. Utilities should invest reserve or any funds that will not be needed for at least _____, but are advised to avoid _____ investments.
15. A budget is a _____ tool for estimating _____ and _____ and should reflect the _____ of the utility.
16. A budget officially becomes an authorizing document to spend money when it is _____.
17. What are the three types of budgets needed by a utility are the operating budget, the _____ budget and the _____ budget.

18. The period of time covered by the utility operating budget is called a _____ year.
19. The advantage to developing a 5- or 10-year budget is that a utility can spot _____ in income, expenses or capital needs and prepare for them.
20. The budgeting method that requires detailing the cost of each activity and expenditure is called _____-up budgeting.
21. The budget _____ is a written summary of the general content of the budget that is prepared by the utility manager and presented to the policy-making body.

Financial Management I — Worksheet & ANSWERS

1. List at least four authorizing documents that give a utility the authority to act:
utility ordinance; budget; utility operations plan; rate schedule; collections policy; service agreements; accounting policy and procedures; personnel policy and procedures; operations policy and procedures
2. Utility accounting is a cyclical process. Place the following accounting steps in proper order starting with the budgeting process.
 - a. 1 Budgeting
 - b. 4 Reporting
 - c. 5 Analysis
 - d. 3 Accounting
 - e. 2 Rate setting
3. The receipt or payment of money is called a transaction, the basic unit of accounting.
4. A utility should choose an accounting system that has a level of complexity that meets the needs of the utility, yet is easy to operate.
5. The system of maintaining the individual transactions for each type of activity in separate accounting books is called fund accounting.
6. The chart of accounts is the component of the accounting system that allows us to place income and expenses into categories.
7. The categories in the chart of accounts must match the categories in the budget exactly.
8. The authority for the customer billing and collection system is established in the utility ordinance and detailed in the accounting policy and procedures manual.

9. The accounting system used to track money spent by the utility is called the ac-
counts payable system.
10. What are the three steps in the payroll system?
- a. calculating wages, taxes, and other payroll deductions
 - b. paying employees and the IRS
 - c. maintaining records and filing tax reports
11. If a utility is short of cash to pay all of the payroll and payroll taxes they should:
- a. Pay all of the payroll and pay the taxes when they can
 - b. Pay taxes first
 - X c. Pay a portion of the payroll and the proper amount of payroll taxes, then pay the remainder of the payroll and taxes later.
12. It is very difficult for a small utility to obtain funds to replace capital assets. However, it is desirable to put aside 10% of the value of these assets in order to pay for pre-engineering, planning costs and/or match for grants.
13. Money to place in the reserve funds comes from user fees
14. Utilities should invest reserve or any funds that will not be needed for at least 30
days, but are advised to avoid speculative investments.
15. A budget is a financial planning tool for estimating income and
expenses and should reflect the goals (or objectives) of the utility.
16. A budget officially becomes an authorizing document to spend money when it is
passed by the Policy Making Body.
17. What are the three types of budgets needed by a utility are the operating budget, the
capital improvement budget and the cash flow budget.

18. The period of time covered by the utility operating budget is called a fiscal year.
19. The advantage to developing a 5- or 10-year budget is that a utility can spot trends in income, expenses or capital needs and prepare for them.
20. The budgeting method that requires detailing the cost of each activity and expenditure is called bottom-up budgeting.
21. The budget message is a written summary of the general content of the budget that is prepared by the utility manager and presented to the policy-making body.

Financial Management II — Worksheet

1. Financial reports provide information on the _____ of the utility, while management reports combine financial data with _____ data.
2. Identify each item below as belonging on a financial report (F) or a management report (M).
 - _____ a. Totals for year-to-day expenditures
 - _____ b. Cost per 1,000 gallons of water treated
 - _____ c. Cost per kilowatt of power consumed
 - _____ d. Comparison between budgeted and actual amounts
 - _____ e. Cost of labor for repairs and for operations
 - _____ f. Cost of fuel per customer
3. What are the three criteria that should be met when setting rates?
 - a. _____
 - b. _____
 - c. _____
4. The _____ of certain _____ is OK as long as the amount of _____ and the effect it has on other customer's rates are communicated.
5. Rates should be reviewed once each _____ or when there has been a major _____ in the system or _____ base.
6. Utility costs can be divided into four areas:

Financial Management I & II

7. The only cost category that is divided among all the customers is the _____ and therefore is the only one fed into the _____.
8. The cost of service should be allocated to each customer based on the _____ for that customer or class of customer.
9. In order to lower one group's rates you either have to _____ or _____ their rate by raising _____.
10. The method of setting rates needs to be described in the _____.
11. Rates are usually approved by the policy-making body through a _____ or _____.
12. What are the three components of a collection system?
- a. _____
 - b. _____
 - c. _____
13. The _____ should contain a special section outlining the _____ of the utility in handling the collection of fees.
14. A simplified version of the _____ should be printed on the _____ that should be signed by each customer.
15. The two most common reasons a customer does not pay their account on time are:
- a. _____
 - b. _____

16. What are the two strategies used to collect past due accounts?

a. _____

b. _____

17. What are the four ways to approach risk management?

a. _____

b. _____

c. _____

d. _____

18. To transfer risk usually means to _____, the two basic types of which are _____ and _____.

19. An audit is a formal process of _____ that the bookkeeping practices of the utility are _____, that funds have been _____ and there has been no _____ of funds or assets.

20. Often, a formal audit will be required as a condition of _____.

Financial Management I & II

Financial Management II — Worksheet & ANSWERS

1. Financial reports provide information on the financial health of the utility, while management reports combine financial data with operational data.
2. Identify each item below as belonging on a financial report (F) or a management report (M).
 - F a. Totals for year-to-day expenditures
 - M b. Cost per 1,000 gallons of water treated
 - M c. Cost per kilowatt of power consumed
 - F d. Comparison between budgeted and actual amounts
 - F/M e. Cost of labor for repairs and for operations
 - M f. Cost of fuel per customer
3. What are the three criteria that should be met when setting rates?
 - a. be set based on established written procedures
 - b. be understandable and explainable
 - c. be fair to all customers
4. The subsidizing of certain classes of customers is OK as long as the amount of subsidy and the effect it has on other customer's rates are communicated.
5. Rates should be reviewed once each year or when there has been a major change in the system or customer base.
6. Utility costs can be divided into four areas:
 - a. Cost of providing service
 - b. Cost of expansion
 - c. Cost of special services
 - d. Cost of penalty items

7. The only cost category that is divided among all the customers is the cost of providing service and therefore is the only one fed into the rate model.
8. The cost of service should be allocated to each customer based on the percentage of use for that customer or class of customer.
9. In order to lower one group's rates you either have to reduce costs or subsidize their rate by raising another group's rate.
10. The method of setting rates needs to be described in the utility ordinance.
11. Rates are usually approved by the policy-making body through a resolution or non-code ordinance.
12. What are the three components of a collection system?
 - a. authorization to collect funds
 - b. written procedures
 - c. practical strategies
13. The utility ordinance should contain a special section outlining the policy and philosophy of the utility in handling the collection of fees.
14. A simplified version of the collection philosophy and policy should be printed on the agreement for service that should be signed by each customer.
15. The two most common reasons a customer does not pay their account on time are:
 - a. they lack the money
 - b. they are dissatisfied with the service

Financial Management I & II

16. What are the two strategies used to collect past due accounts?
- a. positive
 - b. negative
17. What are the four ways to approach risk management?
- a. eliminate the risk
 - b. reduce the risk
 - c. assume the risk
 - d. transfer the risk
18. To transfer risk usually means to purchase insurance , the two basic types of which are liability and property/casualty .
19. An audit is a formal process of verifying that the bookkeeping practices of the utility are proper , that funds have been properly used and there has been no theft of funds or assets.
20. Often, a formal audit will be required as a condition of receiving a grant .

